

A *progressive architecture*

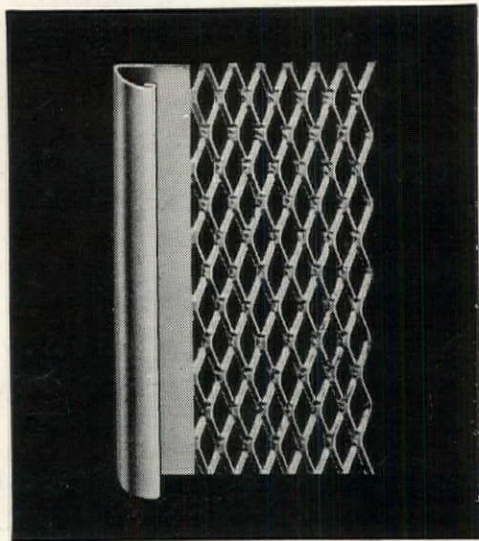
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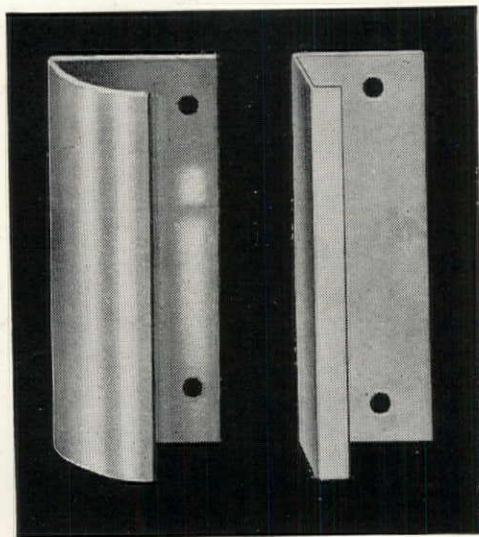
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No. 138 Short Flange

No. 66 Short Flange



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Progressive Architecture

(PENCIL-POINTS)

March, 1948

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Mr. Neil R. Messick, President
Minneapolis Civic Center Development Association
Nicollet Hotel
Minneapolis, Minnesota

Dear Mr. Messick:

We want to congratulate you on the way you, a group of businessmen, have approached the question of replanning the Loop area of your city. In reviewing the material submitted to us by Long & Thorshov, architects, for use in this issue in the article on their approach to design, we were particularly struck by several things. One was the way in which the architects have organized their own office to handle work intelligently. Another, of course, was the quality of the work itself. The third was the fact that they had been sponsored in the civic center studies by your group.

Planning in the United States has for too long been a theoretical matter, a concern only of students or specialists. Your realization of the fact that good planning can make good business sense is a very welcome trend. You have used a very effective approach to the problem of urban decay: to form a businessmen's group, to retain a technical consultant, to have a competent design firm prepare graphic studies, to engage in a broad citizen education campaign. It is small wonder that you begin to see results appear. We hope that you are not going to stop at that accomplishment.

As you know, we publish for the designing professions. We are sure that the story we can tell about your work will inspire other architects to work with and perhaps help form similar associations in their communities.

Very truly yours,

The Editors
The Editors

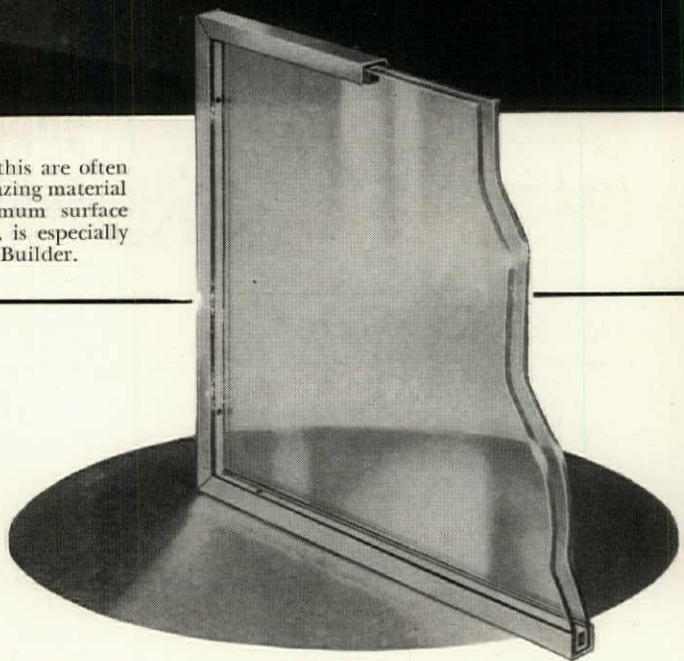
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Practical, attractive *Glass*



TO TAKE ADVANTAGE OF attractive surroundings, picture windows like this are often indicated. Pittsburgh Polished Plate Glass has always proved a superior glazing material for such windows—being flawlessly transparent and possessing maximum surface beauty. Twindow, "Pittsburgh's" new window with built-in insulation, is especially suitable for picture window applications. Joseph J. Tarantino—Designer-BUILDER.

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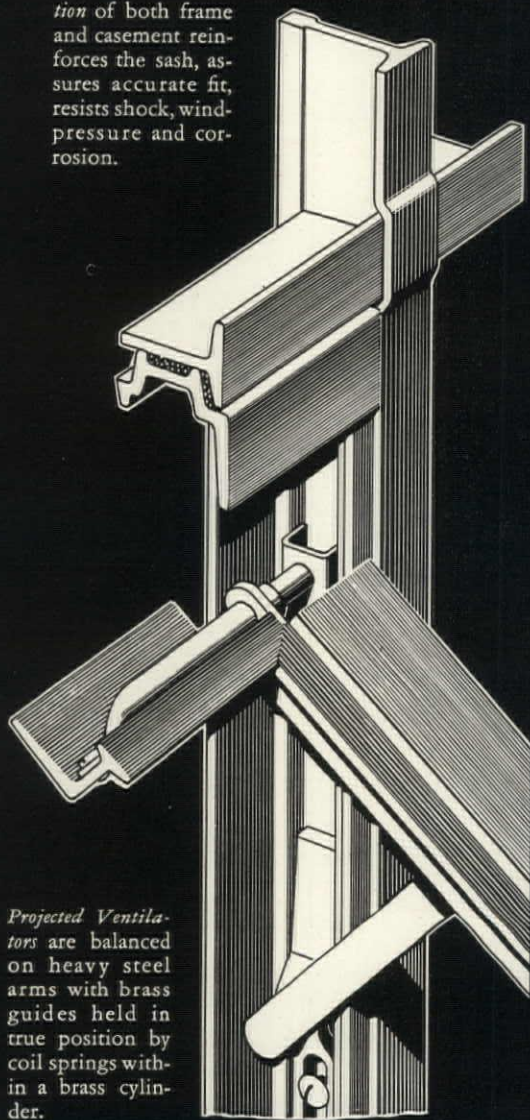


PITTSBURGH PLATE GLASS COMPANY

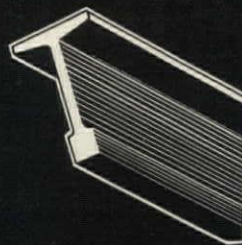
FACTORY SASH

PIVOTED OR COMMERCIAL PROJECTED DESIGN
AND CONSTRUCTION FEATURES

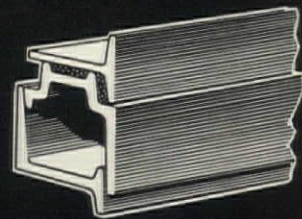
Solid Welded Ventilator Unit Construction of both frame and casement reinforces the sash, assures accurate fit, resists shock, wind-pressure and corrosion.



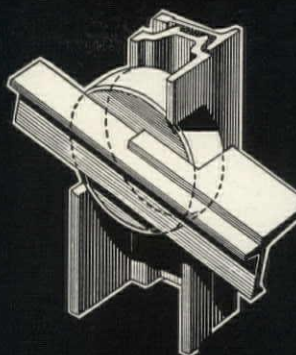
Projected Ventilators are balanced on heavy steel arms with brass guides held in true position by coil springs within a brass cylinder.



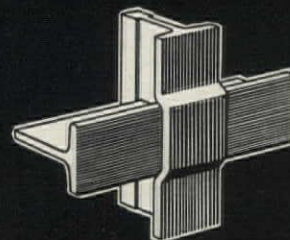
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JUST NOT ENOUGH

Dear Editor: I wish to compliment you on your splendid editorial work and, also, on the general "setup" of the magazine. I honestly believe that it comes nearer being the ideal architectural magazine than any other. All that I have to criticize is that you do not get enough into the magazine. We enjoy it so much we would like more.

F. ARTHUR HAZARD
Augusta, Ga.

LIKES A REVISION

Dear Editor: It is gratifying to see the architect's picture and short biography and comment with the accompanying article of interest. In the past, the architect's biography, which appeared separate from the work shown, was sometimes overlooked. This is another good improvement to your "Progressive" magazine.

BOB SMITH
Charleston, W. Va.

ARTICLE DEFENDED

Dear Editor: In a letter published in *PROGRESSIVE ARCHITECTURE*, issue of January, 1948, William W. Lyman, Jr., of Cambridge, Massachusetts, philosophizes on the architect's responsibilities in taking into account the human element, when planning and designing.

He then ends up with an attack on the *Weekly Bulletin of the Michigan Society of Architects* for helping "discredit the profession" by publishing a news release on the Patman Housing Bill issued by The Producers' Council, Inc.

Just what connection there is between the two subjects of his letter is not made clear.

Here is what he says about the *Weekly Bulletin*:

"I want to point to one example of the type of activity which I feel helps discredit the profession. A year ago last spring Congress was debating the Patman Housing Bill, one section of which proposed subsidy payments as a means of encouraging greater production of building materials. While the bill was under discussion in Washington, the Michigan Society of Architects permitted its *Weekly Bulletin* of April 16 to be used almost in its entirety by The Producers' Council, Inc., for a debatable attack on the subsidy provisions of the Patman Bill. I doubt if such use of the *Bulletin* by a self-interested, outside organization falls within the limits of 'genuine service' as defined by Mr. Brumbaugh.

"What the profession badly needs, as you stated in your editorial, is a lot more objective thinking about all issues affecting architecture, planning, and society, and discussions that go to the bottom of these issues. Most of all it needs a deeper understanding of what is best for society as a whole, and the realization that what is best for the latter is also best for itself."

By his reference to a "debatable attack on the subsidy provisions of the Patman Bill," Mr. Lyman seems to admit that at least the subject was debatable. *PROGRESSIVE ARCHITECTURE*, the *Weekly Bulletin*, and other such publications endeavor to report the news. They don't make it.

If The Producers' Council is a "self-interested, outside organiza-

(Continued on page 10)

MORE PRO...NO CON! (See also February 1948 P/A)

Dear Editor: I thoroughly agree with you in your analysis of "research" of the kind that you mention. Also, that there is a crying need for dependable information to enable us to properly evaluate the tremendous amount of material and equipment that is now at our disposal.

Some years ago I had the idea of establishing my own department for culling from the construction field information that is available, but that has not been properly collected and evaluated. I thought of also making it a clearing-house for information regarding defects of buildings and shortcomings of construction material. My idea was to obtain subscribers among architects and engineers from various parts of the country and then issue bulletins from time to time as things developed. My feeling was and still is that there is a lack of coordination of technical knowledge. However, it is not a very easy thing to overcome this handicap, principally because each manufacturer is committed to rave about his own product, conceal its shortcomings, and get hopping mad at you if you don't agree with him. Regardless of this situation, my approach to the problem is still, everything considered, somewhat the same; namely, that rather than institute "research" of isolated cases, make an attempt to take advantage of the information that is available on a tremendous scale on various materials as they exposed themselves, both as to their merits and their demerits through a multiplicity of varying conditions in actual installations.

As you know, the architects have started various attempts along these lines. My understanding is that it is financed partly by manufacturers and has as its main objective to evaluate their products. To my mind this should be a very secondary function. Far better would it be, I think, to emphasize the importance of obtaining case his-

tories of various construction methods and materials with particular emphasis on where they have failed.

It seems so foolish to meet up with mistakes that are being repeated over and over again, just for lack of accumulation and dissemination of the necessary information to prevent them.

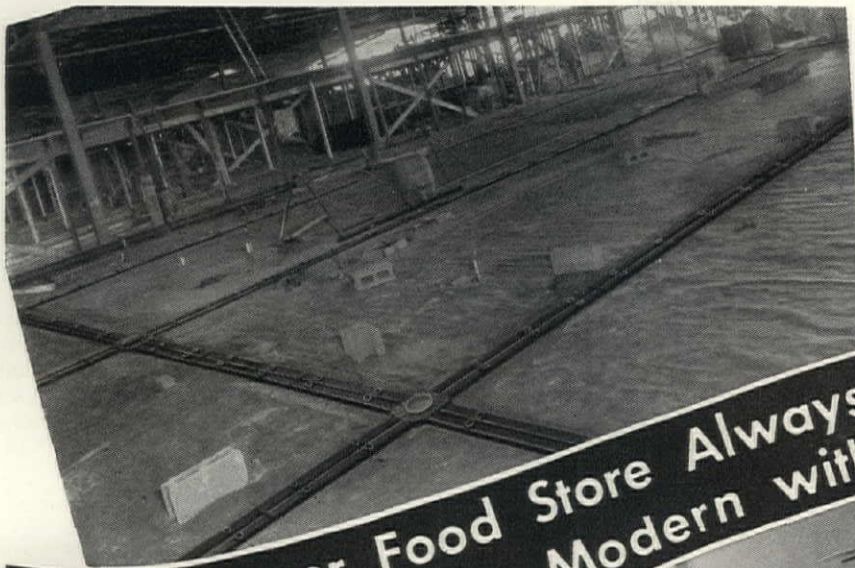
FRED N. SEVERUD
New York, N. Y.

Dear Editor: There is always the possibility that the University of Illinois press agent completely misunderstood what the Small Homes Council is up to, and wrote something within the scope of his knowledge and imagination, which may or may not have had much to do with the research program. Original exploration and validation may have gotten mixed up and emphasis may have been placed on all the wrong things.

If the press report is to be taken at face value, I certainly concur with your evaluation of the project described. Who considered 768 square feet a minimum house? How do we measure how well a three-person family can live in the house? Are the members of the family supposed to gain weight, or do we measure shifts in social attitudes? Is it not just a matter of definition whether laundry is done in the kitchen or the cooking done in the laundry? Ah well!

Maybe this project is a hoax devised to make possible the construction of one home for one veteran, without interference by the ordinances, rules, and trade practices which render building so difficult now. If such be the purpose, I'm for it. However, a more plausible story should be developed to disguise the builder's intent.

HAROLD BURRIS-MEYER
Stevens Institute of Technology
Hoboken, N. J.



New Super Food Store Always
Modern with WALKERDUCT

Joseph Margolis
Architect, Phila.

Joseph Sand
Engineer

Electric Constructors, Inc.
Millville, N. J.



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UNDERFLOOR SYSTEMS

(Continued from page 8)

tion," we don't believe the American Institute of Architects would be affiliated with it. It is the only organization so affiliated with the Institute. The two organizations work closely together for the good of the profession and the building industry, even if they don't always see eye to eye on every issue. There was difference of opinion on the Patman Bill, even among the Institute's own members. In our article, Mr. Douglas

Whitlock, chairman of the Advisory Board of Producers' Council, was merely pointing out what appeared to him to be valid reasons why the bill would not accomplish what its sponsors and Mr. Wilson Wyatt claimed it would. Certainly, it is not logical to call The Producers' Council a "self-interested group," while pointing out that it opposed Government subsidies to its own members.

When a publication refuses to consider

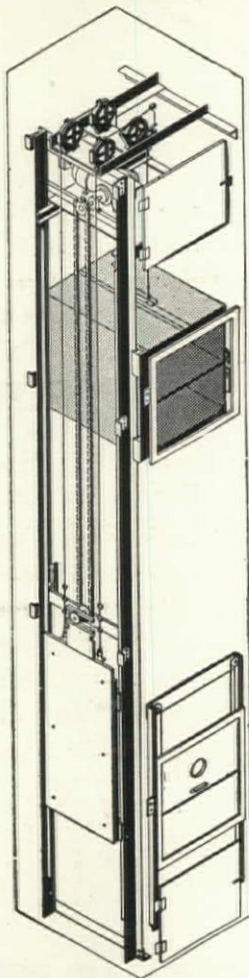
both sides of a question, it is not a free press. This is not in line with the last paragraph of Mr. Lyman's letter, in which he advocates "discussions that go to the bottom of these issues . . . of what is best for society as a whole, and the realization that what is best for the latter is also best for itself."

While neither the *Weekly Bulletin* nor the Michigan Society of Architects was expressing Mr. Whitlock's views as its own, we make no apologies. We would do the same again.

TALMAGE C. HUGHES, Editor
Weekly Bulletin of the
Michigan Society of Architects
Detroit, Mich.

ROTO-WAITER by Sedgwick

**A new kind of fully automatic
electric dumb waiter
that never overtravels**



The endless chain drive of the new Sedgwick Roto-Waiter makes it the perfect dumb waiter for stores, hospitals, hotels, restaurants, libraries, clubs, schools, banks, factories, residences, etc.—especially for two-stop installations.

The single direction motor helps cut costs by eliminating the need for special control equipment normally required when reversing motors are used—and, by reducing starting torque, it cuts current consumption.

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1. Never overtravel
2. Are completely factory-assembled-and-tested
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5. Require no heavy load-bearing supports except at the bottom
6. Are easy to install

The table of dimensions shown below lists three standard counterweighted Roto-Waiters. In addition, Sedgwick makes an uncounterweighted Roto-Waiter—capacity 150 lbs., car size 24" x 24" x 36"—which is ideal when a dumb waiter is to be installed in limited space as for undercounter use.

STANDARD ROTO-WAITER DIMENSIONS

Size No.	2C	3C	5C
Capacity, lbs.	200	300	500
Car width, in.	24"	30"	36"
Car depth, in.	24"	30"	36"
Hoistway width, in.	33"	39"	45"
Hoistway depth, clear in.	27"	33"	39"
Hoistway depth, including doors, in.	29"	35"	41"

So if you are stymied by perplexing lifting and lowering problems involving the vertical movement of material and merchandise—tell us about them. And write for complete details and specifications of the new electric dumb waiter that cannot overtravel—the Sedgwick Roto-Waiter.

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ELECTRIC AND HAND POWER ELEVATORS AND DUMB WAITERS

Re: OSCAR NIEMEYER

Dear Editor: The undersigned architects have sent the accompanying letter to the Secretary of State. We urge any other architects who agree that Senor Niemeyer's presence in the United States would not tend to undermine our institutions, but might rather strengthen international cultural understanding, to address similar appeals to the State Department, which has refused him a visa.

The Honorable George C. Marshall
Secretary of State
Washington, D. C.

Honorable Sir: We, the undersigned architects, have read of the Department of State's decision preventing Oscar Niemeyer from entering the United States and giving a series of lectures at Yale University. Senor Niemeyer has demonstrated an unusually high professional standard in all his work. His prestige as a Brazilian architect is unparalleled. His contributions to the building plans for the United Nations are outstanding. His position as one of the world's great architects has been widely acknowledged.

We feel his exclusion from the United States is a setback to the desirable exchange of information among members of our profession, and an implied insult to the remarkable architectural work being produced in Brasil.

We respectfully request that his application for a visa be reconsidered in order that cultural relations with our neighbors to the south can be strengthened, and that our profession can benefit from the contact with an architect of Senor Niemeyer's stature.

Respectfully,

Prof. Talbot Hamlin, A.I.A.
Simon Breines, A.I.A.
Henry Churchill, A.I.A.
Jules Korchein, A.I.A.
Maxfield F. Vogel, A.I.A.
Jacob Moscovitz, A.I.A.
Isadore Rosenfield
Walter Sanders, A.I.A.
Richard Stein, A.I.A.
Julian Whittlesey, A.I.A.
Henry Wright

(Continued on page 12)

DOUBLE DUTY INSULITE



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(Continued from page 10)

NO UNPLANNED COMMUNITIES

Dear Editor: The opening remarks of the "Progress Report" in *PROGRESSIVE ARCHITECTURE* for February are unfair to the planners. There are many sins for which they may properly be called to task, but revolution is perhaps not a proper one.

You may say that planning is largely

a matter of theory in the United States, adding that examples of planned communities are so rare as to be classic. The fact is, of course, that examples of *unplanned* communities built since the start of the planning movement are even rarer. New communities no longer spring up overnight, and when one is built, it follows a plan.

We may dislike many of these plans, just as we dislike some of the architectural plans which are being translated into buildings. Nevertheless, they exist, and the problem, as in architecture, is one of education.

Further, it is important to recognize that the making of planning studies, whether for new communities or old, is only a small part of the planner's work. Planning is a long and difficult process; its interests are social and economic as well as physical.

The studies discussed in your report are prepared for existing communities by consultants, and in that sense they are comparable to the preliminary drawings of an architect. Should the process stop with such studies, good as they may be, nothing will have been accomplished.

If you wish to observe the long process of effectuation of plans, look rather at the planning agencies, of which there are probably 1500 in the United States. That some of these agencies are limited in personnel, in funds, and even in ability cannot be denied; creative genius is no more common in planning than in architecture. They cannot, however, be dismissed as "a matter of theory."

BURNHAM KELLY, Assistant Director
Albert Farwell Bemis Foundation
Massachusetts Institute of Technology
Cambridge, Mass.

IN THIS CORNER

Dear Editor: Thank you so much for your very nice comment about us in the January issue of *PROGRESSIVE ARCHITECTURE*. Both our faculty and students were delighted with it, and it is nice to have an encouraging word from you.

As you know, I have felt that isolated as we are here, we are working very much in a vacuum, and we enjoy your visits and visits of others and any other commentaries we may receive.

We are working on some revisions of our curriculum now and after that we will be in a position to challenge any other school in the country.

CARL FEISS, Director
School of Architecture & Planning
University of Denver
Denver, Colo.

ARCHITECTURAL REFLEXES

Dear Editor: The debates between modern and traditional schools have moved me to add a few thoughts of my own.

Forty years of architectural experience have taught me that good architecture has always reflected the philosophy of its period. It did this by a thorough understanding of its resultant activities, proper planning, and imaginative and skillful utilization of the materials

(Continued on page 14)

WHY CORROSION CAN'T DESTROY this laboratory waste disposal system

The sinks, strainers, traps, pipe, fittings and fume exhaust fan in this chemical laboratory corrosive-waste disposal system are made of Duriron. The high silicon iron composition of Duriron gives it a wider range of corrosion-resistance than any other commercially available alloy. Duriron can be expected to outlast the building.

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Stores, offices, showrooms, theater lobbies and other public places will soon be transformed by this new and spectacular lighting installation.

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If you are building, remodeling or redecorating a store, office or similar interior, remember "the ceiling that glows with light!"

Write Department DA-58 for further information on electrical properties and uses of VINYLITE Brand Plastics.

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PLASTICS

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(Continued from page 12)

and craftsmanship available and best adapted for the purpose.

Modern philosophy is in such a state of indecision that we are faced with the possibility of war to settle the issue. You may be sure that this indecision will affect architectural thought and create schools corresponding to its many reflexes. Architecture, therefore, finds itself at the crossroads with many avenues of possible development, many of

which will prove dead-end streets.

Certainly imagination, courage, and ingenuity should be encouraged to find new solutions for our architectural problems. That is the essence of progress, but I would caution that building is civilization's oldest industry with a vast store of accumulated knowledge and experience which cannot be lightly cast aside.

Until a century or so ago architecture

was limited in the scope of its expression by the physical properties of wood and masonry as structural mediums. When iron and steel entered the field, it shattered many concepts of architectural and structural design and created a freedom which formed the basis for modern architecture.

Many modern designs utilize traditional building materials in such a manner as to not only ignore their physical properties, but in many cases they do not take full advantage of them. In fact, we now find masonry and wood used in such a manner as to reflect, in part, the physical properties of steel; and despite the "slide-rule boys," nature and time will soon prove their lack of understanding of the true nature of these materials.

As an illustration, about 15 years ago when the plans were completed for two of New York's highly publicized modern buildings, an expert on masonry waterproofing called at our office, rubbed his hands in anticipation, and stated, "I just saw the working drawings. Those buildings will leak like sieves, and when they are built, I will get the job to waterproof them." He did! A thorough understanding of building materials, their physical characteristics, weathering, and maintenance problems are essential before you can successfully fabricate them into new forms of construction.

It is interesting to note that many modern designs have been drawn to create effects and the so-called functional plans have, in many cases, been designed to provide preconceived compositions, textural effects, and color, which proves that no matter how we try to regiment and mechanize our designs the craving to express culture is so deeply rooted that a designer with the proper background will do it automatically. I am convinced that real progress will prove to be evolutionary and not revolutionary, and that we are headed in that direction.

CHARLES E. KRAHMER
Behee & Krahmer
Newark, N. J.

STUDENT INTEREST

Dear Editor: May an architectural student speak his mind in this column? I am referring to Paul C. Reilly's letter on "Help the Draftsman." As a student in this field, such a program on your part would be of real help to the many like myself who expect to enter offices after graduation. Thanks to Mr. Reilly for suggesting the program.

The January issue was one of paramount interest to me and, needless to say, a great help. I wonder, however, what the manufacturers' point of view can be. The varied catalogs that they offer are of genuine interest to us also and somehow they never fail to request that a business letterhead be attached

(Continued on page 16)



Winter DRAFTS and DAMPNESS Can be Avoided

Rain or snow simply can't beat through building joints that are sealed tight with Pecora Calking Compound. Freedom from drafts and dampness due to openings around window and door frames especially, makes for better living and working conditions—less need for medical attention—lower fuel bills.

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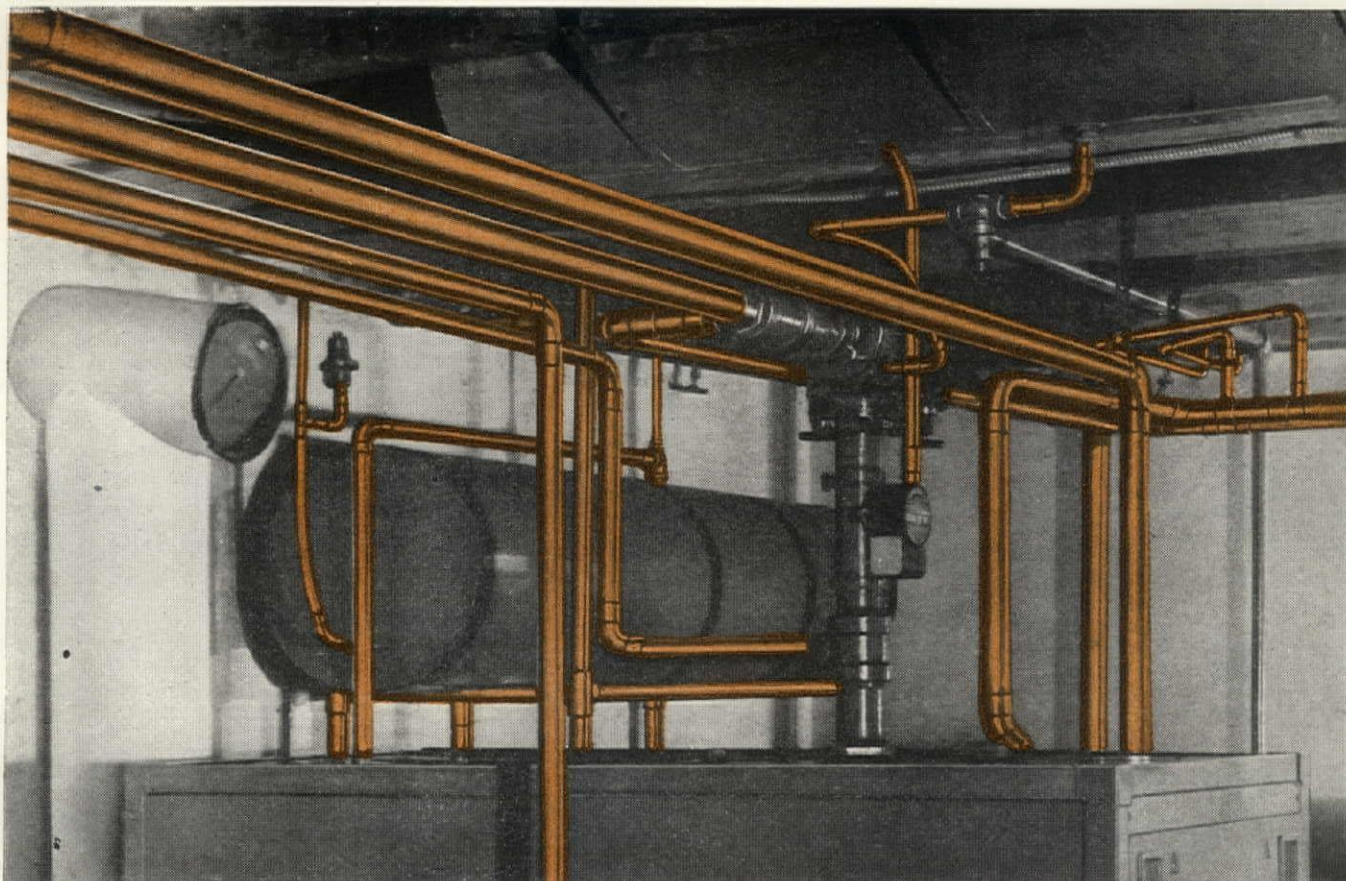


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(Continued from page 14)

to the "coupon below." Don't they realize that the students of today are the architects of tomorrow who will be specifying materials similar to theirs? Now is the time when the minds of the students are being directed toward these materials, and therefore it would seem logical for the manufacturers to let the bars down to the students and place their products before this body of thousands.

RICHARD F. HEYER
New Haven, Conn.

TERRIBLE WHAT?

Dear Editor: Just a note to let you know that your cover of January 1948 issue is terrible.

VALVANO
Orangeburg, N. Y.

GREAT TIMESAVER

Dear Editor: During the past year I have found it increasingly difficult to find time to thoroughly read and study

the architectural magazines and multitudinous other trade magazines and publications that come into this office. In view of this shortage of time I have decided to limit my subscription to one architectural magazine. In order to decide on which subscription to continue, I looked at the current issues. It was unnecessary for me to go beyond the cover to make my decision. In fact, I find that the content of each of them was similar and equally excellent in choice and presentation of material. An architectural magazine that presents to a working architect a table of contents on its cover is a great timesaver.

FRANK C. DELLE CESE
Utica, N. Y.

LESS PHOTOGRAPHY?

Dear Editor: I wish to commend Mr. De Verteuil's letter which appeared in your December issue.

More material presented directly from the drafting board would be of more value to the student, as well as the architect, than page upon page of photographs.

Photography, although a necessary supplement for architectural presentations, is more the tool of the "Real Estate Boys" rather than an architectural publication.

GEORGE L. SULLIVAN, JR.
University of Virginia
Charlottesville, Va.

SOMETHING SUMPTUOUS

Dear Editor: I hope that Harris Armstrong's proposed series of "The Great Houses" will be greeted with more than enthusiasm. Anyone who has been unable to see these important buildings (I am assuming that some of the landmarks of the early years will be included) would welcome a complete presentation such as Mr. Armstrong has proposed (December 1947 PROGRESSIVE ARCHITECTURE).

I would like, if I may, to embroider Mr. Armstrong's original theme. I feel that the portfolios should be given a format that would be outstanding in the field of graphic arts as the subjects are outstanding in architecture. Such designers as Alvin Lustig, Alex Steinweiss, or Lester Beall might be commissioned to ensure a liveliness of appearance. This may all add to the expense but I envision something in the sumptuous line. However, the kernel of the idea is there in Mr. Armstrong's letter. It is to be hoped that there is enough response to encourage you to plan a series of "The Great Houses."

I am curious about one point in Mr. Armstrong's letter. He specifies that no photograph of the architect should be published. I am sure that in such a series at least one of Mr. Armstrong's houses would be included. Can it be that he is camera-shy?

JOHN PATTERSON
London, Canada



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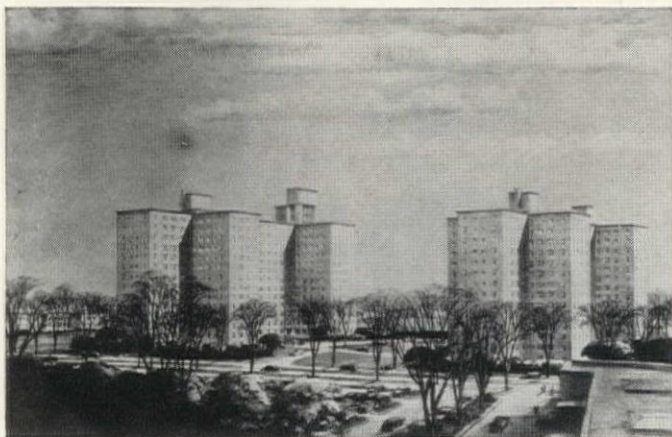


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IN "FRESH MEADOWS" TOO *It's Bruce Block Floors!*



FRESH MEADOWS, owned and operated by the New York Life Insurance Co., is a new trend in large apartment projects. Located on a 170-acre tract of land, it includes 138 two- and three-story and two thirteen-story structures. Two-story units contain duplex garden apartments; three-story and thirteen-story buildings have 3½ and 4½-room apartments. Principals in the planning and construction of Fresh Meadows are: *Architects*—Voorhees, Walker, Foley and Smith; *General Contractors*—George A. Fuller Co.; *Flooring Contractors*—Builders' Wood Flooring Co.

■ Thirteen miles from Manhattan, this modern residential community is now well underway in Queens, Long Island, New York. When completed early in 1949, Fresh Meadows will be "home" for about 3,000 families.

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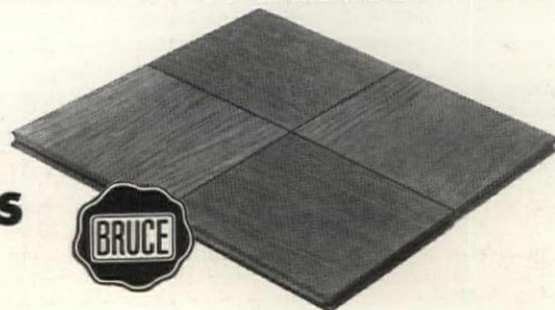
COMFORTABLE—Resilient, warm, comfortable underfoot, a Bruce Block Floor is sound-absorbing too.

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JEFFERSON NATIONAL EXPANSION MEMORIAL COMPETITION WINNERS ANNOUNCED

Award of the \$40,000 first prize in the final stage of the Jefferson National Expansion Memorial Competition to Eero Saarinen and the four associated with him in the design of a \$30,000,000 national monument for the Mississippi riverfront at St. Louis climaxed a jubilant meeting last month of Midwest officials, civic leaders, and the project's sponsors. Full account of the efforts to create an impressive memorial to Thomas Jefferson and his Louisiana Purchase that opened the West constituted an encouraging report of progress.

Saarinen, son and partner of Eliel Saarinen, celebrated architect and planner, received the prize as head of a team including Lily Swann Saarinen, sculptress and wife of Eero Saarinen, J. Henderson Barr, associate architectural designer, Dan Kiley, architect and landscape architect, and Alexander Girard, painter.

A check for \$20,000 was handed to Gordon A. Phillips, architect and instructor, of Aurora, Illinois, heading a team of three winning second prize. Other members were William Eng, architect, and George N. Foster, painter.

Third prize of \$10,000 went to a team composed of seven New York architects and artists with an eighth associate from Yale University. This team included William N. Breger, Caleb Hornbostel, and George S. Lewis, architects; Allan Gould and Andre Schwob, painters; Ralph J. Menconi, sculptor; Donald Leslie Kline and Christopher Tunnard (New Haven), landscape architects.

Runners-up in the final stage each receiving \$2500 as honorarium were Harris Armstrong, of St. Louis, and a six-man team composed of T. Marshall Rainey, architect, Cleveland, Ohio; Robert A. Deshon and John B. Sheblessy, planners, Robert S. Robinson, painter, and John F. Kirkpatrick, landscape architect, all of Cincinnati; and Julian F. Bechtold, sculptor, of Fort Thomas, Kentucky, who is a native of St. Louis.

The problem tackled by the competitors was not restricted to pure design, as there were political, urban, land use, and historic portents all competing for recognition. National as well as local authorities have kept a critical eye on the efforts to evolve an appropriate proposal for the memorial site—and any further development is contingent upon agreement between the several divergent interests.

The part played by the National Park Service, Department of the Interior, to safeguard the nation's interest in his-

toric sites as authorized by the Historic Sites and Buildings Act passed by Congress in 1935, marks an extension of its concern for natural monuments, such as Grand Canyon, to the landmarks of urban areas. Thus to all cities conscious of the need for protection of local historic sites, this effort suggests progress toward a stable guardianship.

The influence of the Park Service in setting requirements for the memorial project, particularly in the final stage, has been considerable. In the addenda handed the five teams chosen to compete in the final stage, it was flatly stated that a "tree shaded park, sloping or terraced down to the river" was wanted. And a "living memorial" was barred, in order to insure an "essentially non-functional" solution that can be acceptable for recommendation to the Department of the Interior. The essentially free program of the initial stage narrowed to more specific limits.

This shifting of the problem during the course of a major design competition has caught the attention of professional leaders acquainted with the incident—and may be interpreted by some as a progressive move toward more exact steering of such activities. Conduct of competitions under the aegis of the A.I.A. Competitions Committee has tended to the stereotyped rules, program, and foreordained judgment. In writing the program for this event, George Howe frankly challenged the competitors to offer their most daring ideas for development of the specified site, observing its historic importance as well as its significance to the urban plans of St. Louis and the regional plans. The too-familiar danger of stifling creative initiative under the dead weight of a whole series of specifications and requirements was thus avoided: the competitors at the same time being freed of any "implied solution" by the professional adviser or sponsors of the competition. Tightening of the program for the second stage, after the jury had reviewed the whole range of ideas submitted in the first stage, was expected. But by this conduct of the competition, the five teams chosen for the second stage were equipped with an advantage that one of the jurors defined as "creative familiarity." Thus the competition itself makes professional history.

Local interest in the competition, represented by the energetic leadership of the Jefferson National Expansion Memorial Association which raised \$225,000 to finance the Competition and provide a prize fund, has centered on a solution for the memorial site that will revitalize the riverfront and also

The May issue of *PROGRESSIVE ARCHITECTURE* will be devoted to a presentation of the winning designs of the Jefferson National Expansion Memorial Competition, supplemented by the Report of the Jury, notes on the Program, and an account of the historic and present architectural background of St. Louis.

Watch for our May issue!

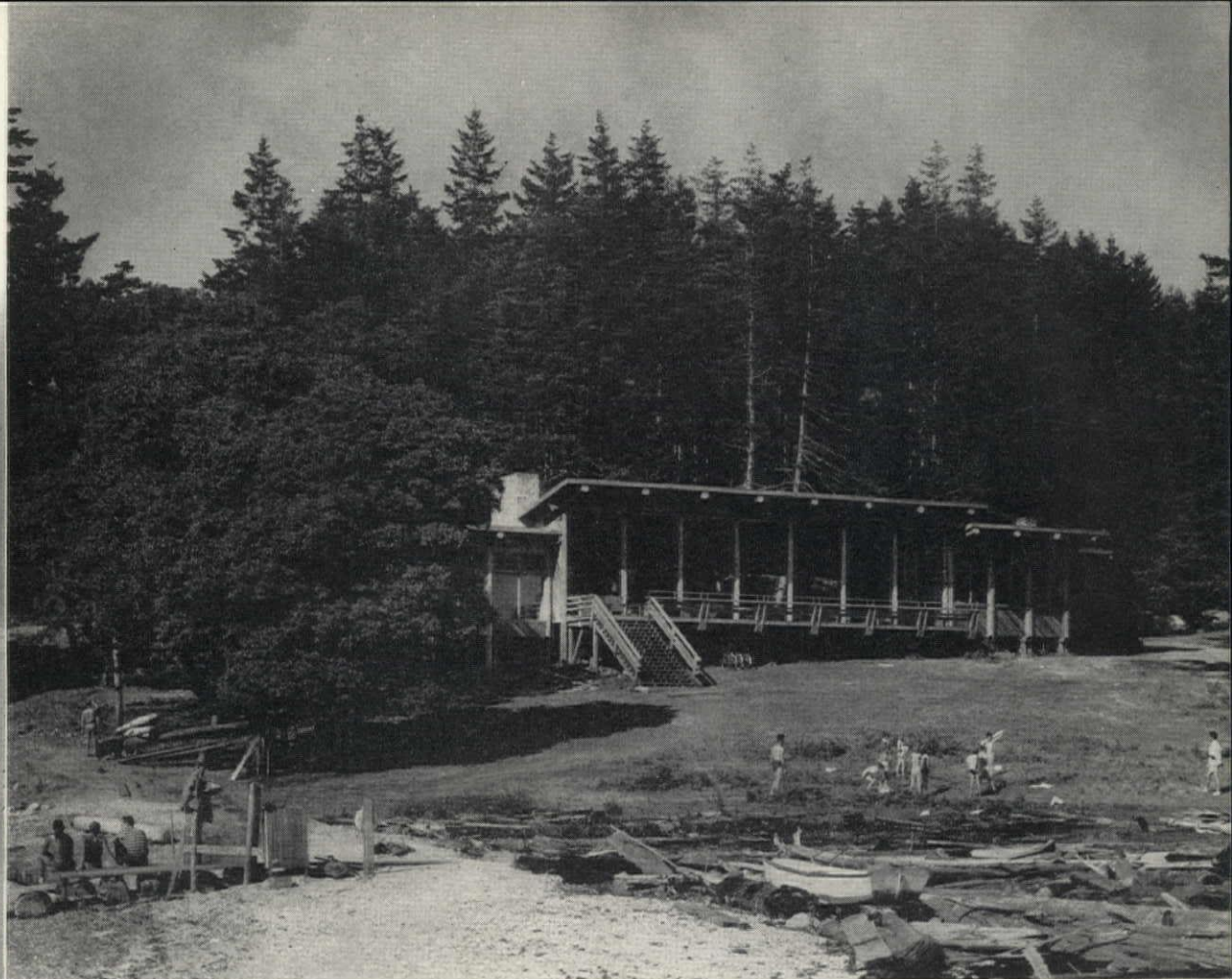
provide a parking area or areas to serve the near-by shopping and financial district of the city. Springing from the earliest commercial era of St. Louis, when the whole settlement was contained within the area now designated as the historic site, the life of St. Louis in the heyday of river traffic depended on the bustle and commerce of the same few blocks. But as the network of railroads took over the burden of freight traffic, the businessmen faced about and turned their attention to activities beyond the riverfront—neglecting the levee as it sank into obsolescence and finally the slum, which was removed in the last decade by intervention of the National Park Service. Thus the return of the emphasis to the riverfront can be a powerful factor in progressive development of downtown St. Louis—reversing the tide of commercial building westward of the present "dead" sections of the city.

Students of city planning and controlled development of urban areas may be struck by the positive effort here to reverse the growth direction of a major city through creation of a strong focal point—which happens to be envisioned as an "essentially non-functional" memorial as well! The futility of freezing urban neighborhoods or belts by zoning, or other legal wishful-thinking, has been amply demonstrated throughout the country. Now if a positive reclamation of a distressed area can recapture civic activity and interest, what schemes may not be started by such other cities as Philadelphia, with her shrine-like Independence Hall marooned in a sea of neglected slums, Pittsburgh, or Boston, whose proudest citizens choose to sing the praises of their cities from beyond the tax limits.

The historical importance of the site of the Jefferson National Expansion Memorial justifies the extraordinary interest that has been evidenced, locally and nationally, and serves again to emphasize the serious approach to an appropriate solution. St. Louis, the river port and trading center through which the hordes poured by water and overland to the unknown West, has played her part with conscious pride and a sense of history in the making. Literally, she was The Gateway to the West.



Feature



P. A. Dearborn

CAMP BUILDING

LOPEZ ISLAND, WASHINGTON

CHIARELLI & KIRK, Architects

NEED: An office, dining hall, and kitchen for the San Juan International Camp—a summer camp that accommodates up to 125 American and Canadian boys and girls from 8 to 17 years of age. Sleeping quarters for the campers are arranged in near-by council-fire groups of wigwams.

SITE: A wooded slope overlooking the waters surrounding the 310-acre island, 70 miles north of Seattle. The particular site was selected both for its magnificent natural advantages and because it immediately overlooks (hence simplifies supervision of) the camp's two main swimming coves.

SOLUTION: A structural scheme, derived from materials obtained directly from the property and worked out within the abilities of unskilled labor from adjoining farms; a plan aligned along the natural contour, with rooms opening up (including an up-sweep roof-line) to the view.

IN SUM: An honest piece of indigenous architecture, with esthetic concept springing directly from the straightforward structural concept.



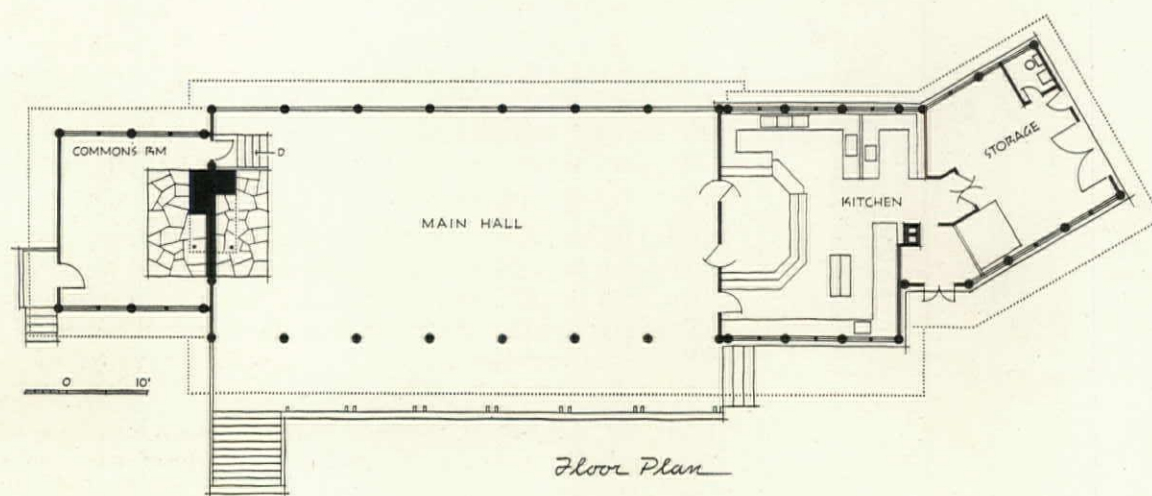
Island Airways



LOGS AND ROUGH-SAWN BOARDS (milled at a local sawmill) were obtained from the stand of second growth fir timber on the site.

CAMP BUILDING, LOPEZ ISLAND, WASHINGTON

CHIARELLI & KIRK, Architects





Ernst Katsowitz

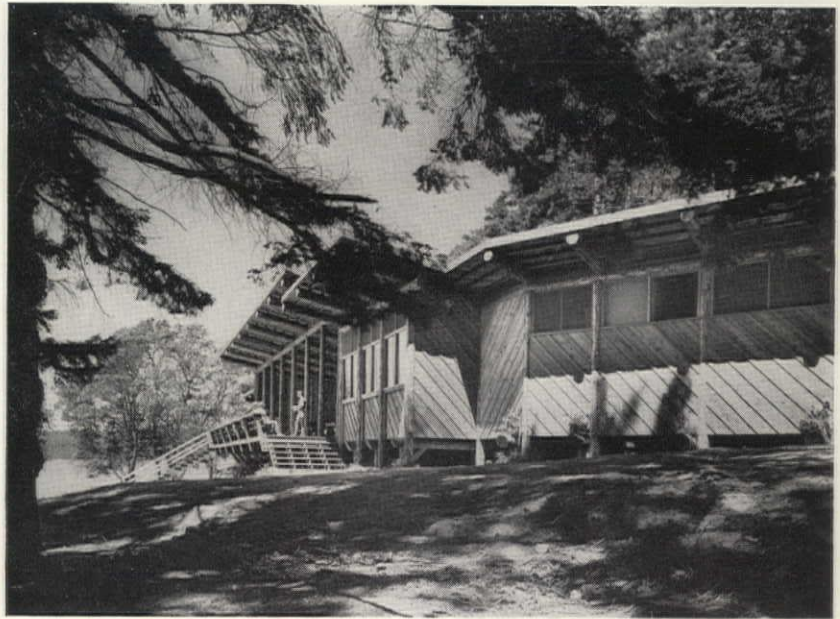
KIRK

CHIARELLI

JAMES JOSEPH CHIARELLI, graduate of the U. of Washington School of Architecture, worked in several offices and served as Field Architect for the Vancouver Housing Authority before forming a partnership with Mr. Kirk. Past president of the University Architectural Alumni Association, he is a member of the A.I.A. and of the Council on Progressive Architecture.*

PAUL HAYDEN KIRK, also an alumnus of the U. of Washington architectural school, started his own practice in 1939, joining Mr. Chiarelli in partnership in 1944.

* For further information on C.O.P.A., see "P.S.," page 148.



THE 2" x 12" FIR BOARDS are applied diagonally for maximum bracing. 1" x 4" battens covering the joints are of local cedar.

P. A. Dearborn Photos

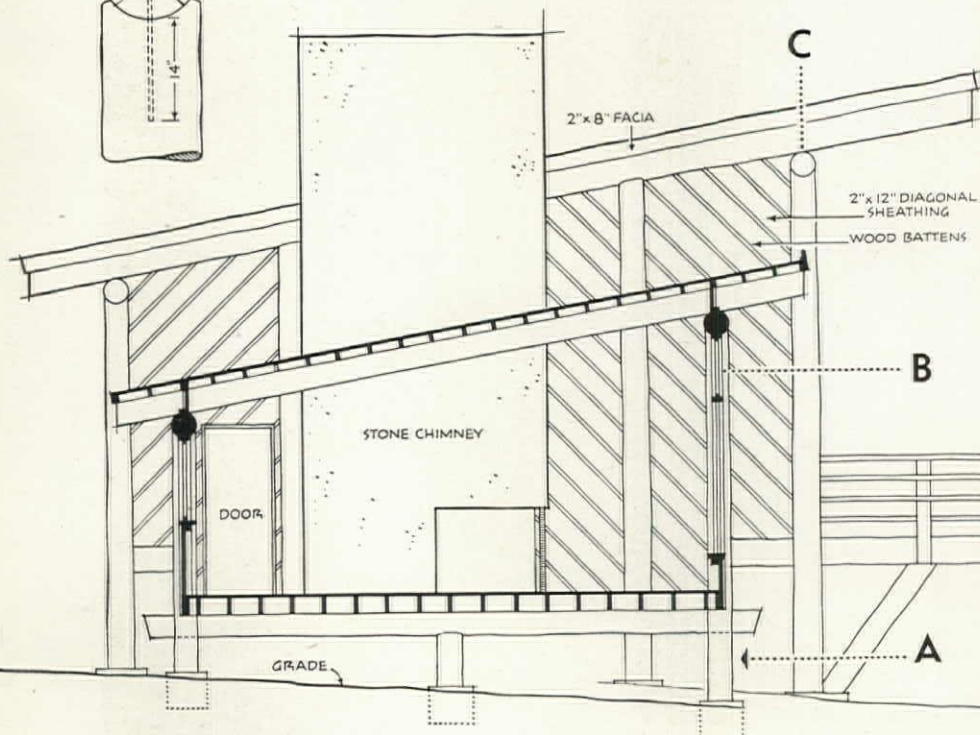
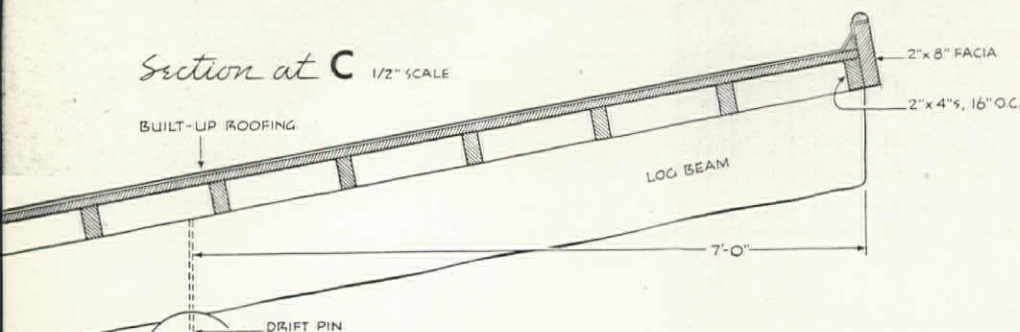
SINCE THE CAMP is located in a relatively dry belt and is used only in summer, a considerable degree of openness was feasible. The roof overhang provides sufficient protection from all but the most exceptional weather. No heating system other than fireplaces to nip the chill of cool mornings or evenings was necessary. The long porch railing includes a continuous bench in its design.



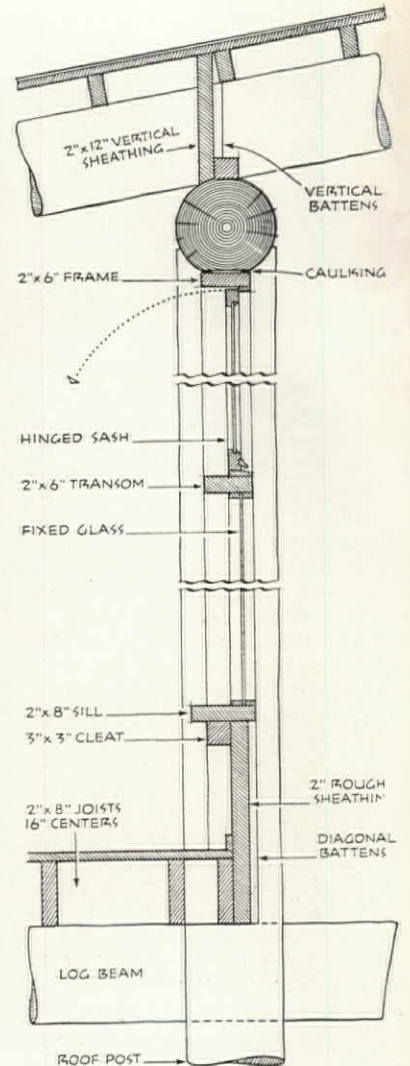


Commenting on the office's approach to architecture in general, Mr. Kirk says: "We are both interested in using local building materials in their most simple and straightforward manner." The camp building proves they practice what they preach.

Section at C 1/2" SCALE

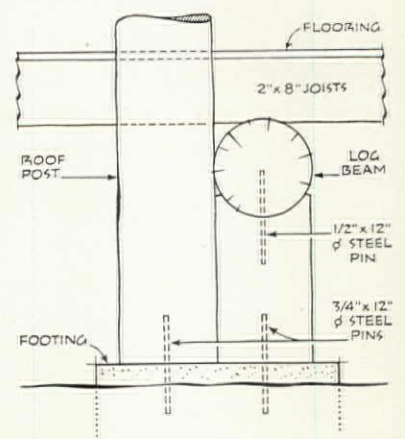


Typical Section 1/8" SCALE



Section at B 1/2" SCALE

Elevation at A 1/2" SCALE





FOR WINTER PROTECTION, there are plywood panels that fill in the large openings of the main hall. Only in the kitchen is the structural wall surfaced—with plywood nailed directly to the boarding, so that there are no hollow spaces for rodents, etc.

**CAMP BUILDING
LOPEZ ISLAND, WASHINGTON**

CHIARELLI & KIRK, Architects



STONE FOR THE FIREPLACES came from the outcropping of rock directly in back of the building. Around these fireplaces are held the general campfire meetings. Roof construction employs solid, diagonal sheathing finished with built-up roofing.



THE OFFICE follows the simple structural scheme of the rest of the building; glazing is of double strength window glass set in wood stops—fixed windows below, operable transoms above.

CAMP BUILDING, LOPEZ ISLAND, WASHINGTON

CHIARELLI & KIRK, Architects



THE HEARTH of the office fireplace extends out to define a sitting area for small group discussions. Artificial lighting consists simply of portable gasoline lamps, as most after-dark activities take place around the campfires of the wigwam groups outside.

THE ARCHITECT AND HIS COMMUNITY

A Case Study: LONG & THORSHOV, INC., ARCHITECTS, MINNEAPOLIS, MINNESOTA

Last October PROGRESSIVE ARCHITECTURE published the first of its Case Studies of architects who are doing outstanding jobs serving over-all community needs. Sheldon Brumbaugh, of Klamath Falls, Oregon, who was the subject of our first study, practices in a small city. The architects discussed here are located in a larger city. Apparently the size of the community is not so important as an active interest in all the community planning and design problems. That is what produces socially useful architecture and, as the members of this firm point out in the following pages, that is what produces a successful practice.

Long & Thorshov, Inc., is one of the oldest firms in the upper Midwest area; it was founded as Long & Kees before 1890, became Long & Thorshov in 1923, and retains that name although both of the original partners have since died. Roy N. Thorshov, present president of the firm, is the son of the first partner by that name. Robert Cerny, an assistant professor of architecture at the University of Minnesota, continues teaching while acting as design consultant to the firm. This, they feel, helps bridge the gap between architecture as taught and architecture as practiced. Contact with Henry Shotwell came while the firm was doing work for the Rural Electrification Administration, where Shotwell was chief architect. His liberal philosophy coincided with that of the firm, and after the war he joined Thorshov as a partner. There are now three junior associates: Donald Houpt, Hubert Swanson, and David Lovell.

THE EDITORS



FELLAND HOUSE, MINNEAPOLIS

Our firm believes that an architect is not only a professional designer earning his living in his community, but that he is responsible for *progress* in architecture and in planning within that community. The architect is licensed by the State; through registration, most of the States set up a partial monopoly for him. This protection and certification by the State, however, also implies responsibility. Militant leadership by other professions, similarly protected, has firmly established them as the leaders within their specialized fields, and today few nonprofessionals challenge this leadership. Doctors educate, lobby, and enforce standards of medical protection upon the community; often they fight against prejudice and superstition. The legal profession is very active in shaping and defining the laws of the land. Architects must assume the same sort of leadership in their field.



ACUTE BUILDING FOR MINNEAPOLIS GENERAL HOSPITAL

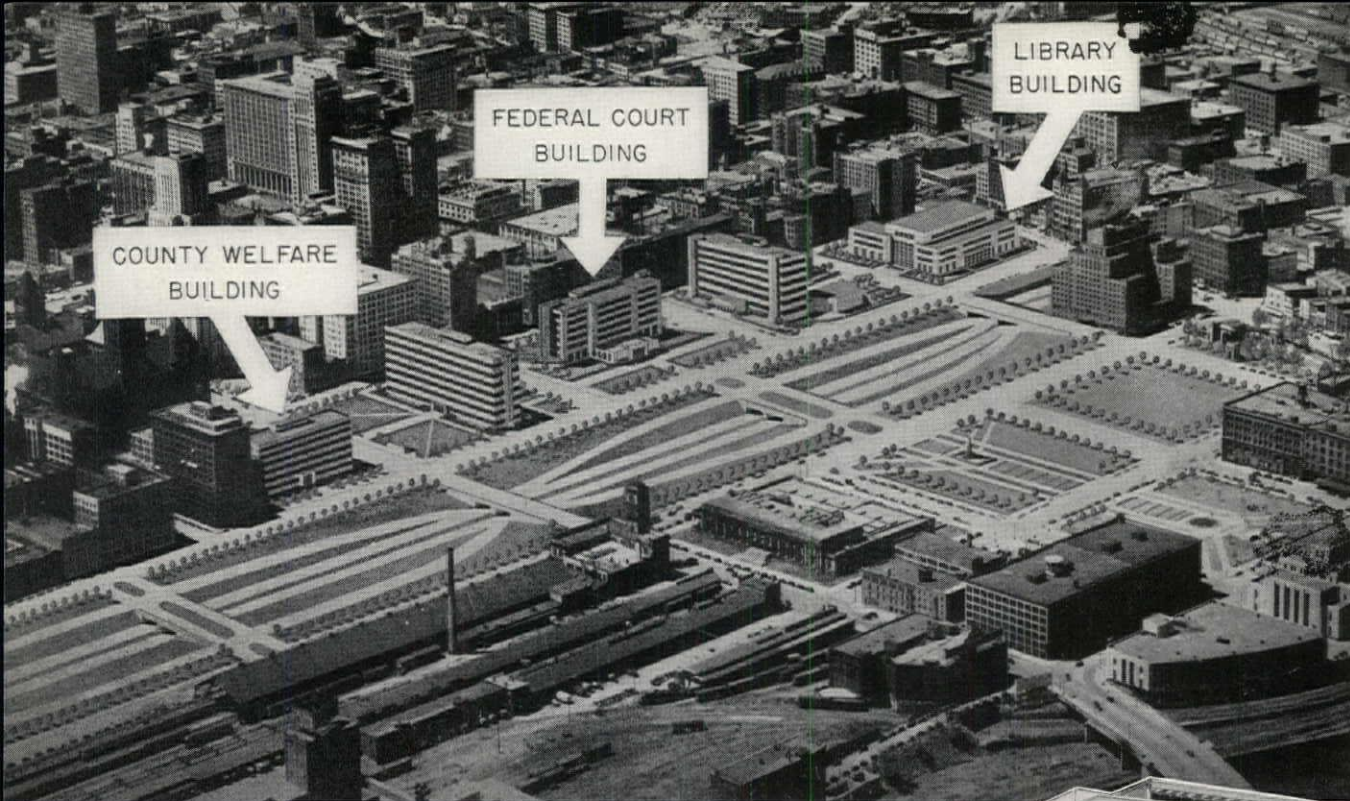
Such leadership, however, must come from firm convictions. The doctor's patient has the option of taking or leaving medical advice—there is no argument in the matter. A doctor who cannot make up his mind is soon forsaken. This must also be true to some degree in the architectural profession. Granted that there is a wider range of client participation in architecture than in medicine or law, there is a large field of discretion which must be reserved for the professional man in the interpretation and organization of a building or a town plan. An essential part of architectural services is the protection of the client from his own prejudices.



ADDITION TO PUBLIC SCHOOL, SHAKOPEE, MINNESOTA

As an instance of leadership based on convictions, our firm limits its practice to contemporary organic architecture. The client who requests a Gothic church or a Colonial house is given a careful explanation of the basis of architecture. He is shown examples of good contemporary work and finally, if it is necessary, is told quite bluntly that the office does not believe in nor can it honestly recommend any other kind of architecture. Surprisingly few clients have been lost by this definite policy, and many more have been impressed with the honesty and conviction of the architect. This early expression of conviction has led to continuous leadership throughout the entire project.

LONG & THORSHOV, INC.



PROPOSED DEVELOPMENT: CIVIC CENTER IN LOWER MINNEAPOLIS LOOP. Long & Thorshov made studies sponsored by a businessmen's group which indicated that public buildings should be near each other because of the overlapping of agencies and the interrelation of many activities from the Federal to the County and City level. Location of the civic center in a blighted district makes it possible to rehabilitate and stabilize the entire central Loop area.



HENNEPIN COUNTY WELFARE BUILDING

THE CIVIC CENTER A PLANNING EXERCISE THAT PAID OFF

We feel that an architect must take some positive leadership in making planning and architectural studies of a public nature within his community. Our experience with the plans for the Minneapolis Civic Center illustrates, we believe, the value to the community and to the architect in such activity.

Space for a civic center had been a part of the City plans for many years but there seemed to be some danger that future public buildings would be scattered about the business area according to some minor expedient, such as the accident of land availability because of tax delinquency. The Federal Government, prior to the war, had taken an option on property for a new Federal Courts building in Minneapolis. The site selected was unsatisfactory from any planning standpoint. It was in the commercial center of town away from existing public buildings and out of the civic center area proposed in the City plan.

Long & Thorshov took upon itself the task of studying the location of all future public buildings in functional relation to each other. The project was a natural for the architects to study; elaborate traffic and zoning studies had already been made by the City Planning Commission; the site involved only five city blocks; it was almost entirely an architectural problem.

Study indicated that most projects of this type failed not because of a lack of plans but because of public misunderstanding, apathy, and the opposition of special selfish interests who would be affected one way or another by the plan. It was felt that the architects' contribution should include education of the public and particularly of the businessmen within the city who would all gain by the stabilization of real estate values in the business district and the termination of blight in the area under consideration.

Sketches were made visualizing the completed development and were presented to several prominent businessmen who responded immediately and, to the amazement of the architects, called a mass meeting of one hundred merchants, bankers, and professional people.

The businessmen were eager to protect their own interest by halting the progress of blight. There were many who faced the immediate problem of remodeling present quarters or rebuilding in an area further uptown. Others found their business gradually decreasing as blight forced people out of the older business area. Many large buildings and commercial enterprises lay at the edge of the blighted area. The businessmen were enthusiastic, and spontaneously the Civic Center Development Association was born. Twenty thousand dollars were pledged for promotion of the project.



RUN-DOWN LOOP AREA AT PRESENT

Long & Thorshov, Inc., was retained as architectural consultant on an annual fee basis and Professor Cerny was made executive secretary of the Association. There followed a long period of promotional activity in which a brochure was published, slides, charts, and drawings were made, and the "Civic Center Program" was presented to over one hundred clubs, associations, and other influential civic groups. At these programs, a member of the architectural firm and a member of the Association generally appeared together; one to present the technical aspect and the other the broad civic interest angle. The businessmen were eager to point out that this planning project was economically sound and would benefit them.

The over-all plan was soon adopted by the Post War Progress Committee of the City Council and by the City Council itself. At present, plans are being prepared for the public welfare building, and architects will soon be commissioned for a new public library building—both in the civic center. There is ample evidence that the Federal courts building will also be located within the civic center.

The Library Board has voted to place the new public library in the civic center, not because it was particularly related to other public buildings, but rather because the site selected for it, within the civic center, was the most convenient and most logical site available in the city. Studies were prepared by our firm showing the traffic pattern, pedestrian concentration, and the convenience of transportation lines to the civic center site and the old library site, which some advocated. An active campaign was started to educate the public to the fact that a modern public library is a service facility and should be made convenient to the greatest number of people within the community. This is in direct conflict with the public concept that a library is expensive and monumental, set apart from the life of the city, preferably in a quiet park.

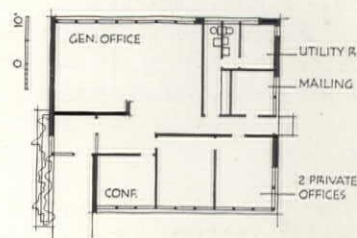
The Hennepin County Welfare Board, some months ago, voted the construction of a new office building

for the County Welfare Department. The County Board owns some property outside of the civic center and for this and other reasons the building was planned to be constructed outside of the civic center. The Civic Center Development Association and our firm met with the County Board and argued the merits of the two sites. The County Board requested that the Association prepare an analysis of the comparative land costs, building costs, convenience, etc., of the two sites. On the basis of this report, the County Commissioners reversed their decision and condemnation proceedings are now advancing on the civic center location.

These activities have involved a considerable amount of work, a large part of which has been financed by the Civic Center Development Association. The average architectural firm normally could not afford the time and effort that have been put into the civic center plans. However, on the basis of this experience, we are certain that there is in every community a group of businessmen who have vision and who are not only willing but eager to finance projects of this kind. There has been a constant campaign in the newspapers, including drawings, sketches, and reports by the Association from material prepared in the architects' offices.

This has had the effect of bringing the name of Long & Thorshov, Inc., before the public as leaders in the planning field. This has also paid off handsomely in reputation and in commissions. The firm is now preparing plans for the new 900-bed City Hospital, the new Hennepin County Welfare Building, and many other important contracts which were obtained at least partially through the contacts and prestige gained by the civic center project.

LONG & THORSHOV, INC.



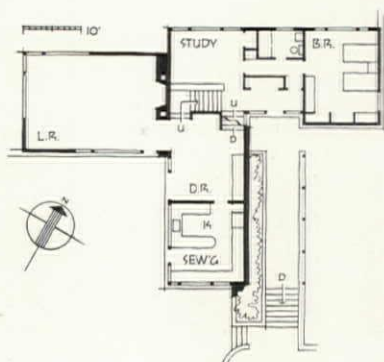
OFFICE BUILDING: GENERAL MILLS SOY BEAN PROCESSING PLANT, BELMOND, IOWA. A well lighted general office and well planned smaller individual offices determine the plan of this straightforward and unpretentious office building for a specialized food processing plant.



MIDLAND BANK BUILDING. Frankly a face-lifting job, notable principally because of the simplicity and dignity of the entrance. Above the main floor the building was resurfaced with brick. The Morton Granite entrance, set in a field of Indiana Bedford stone, frames two aluminum entrances which have sufficient glass to light the lobby amply.



George Miles Ryan Studio Photo



HAMMOND HOUSE. This house on a lake, which will be shown in detail in a later issue, is planned for major rooms to have the most attractive north view, while still gaining solar radiation from the south. Not shown are a separate two-room apartment on the second floor for Mrs. Hammond's mother, and the recreation space on the lower level, made possible by a sharp drop in the property to the north. Construction is a successful combination of wood frame and masonry.

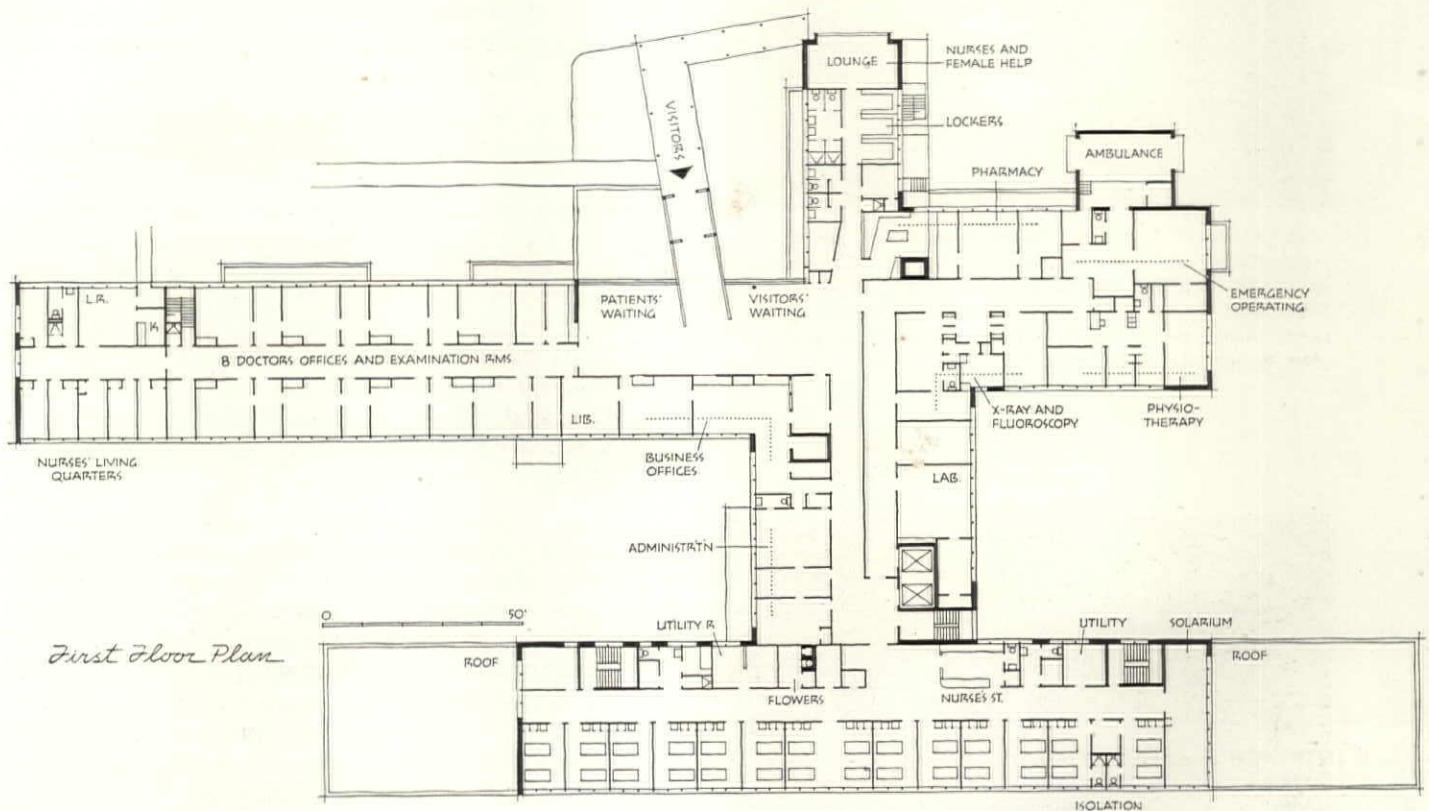
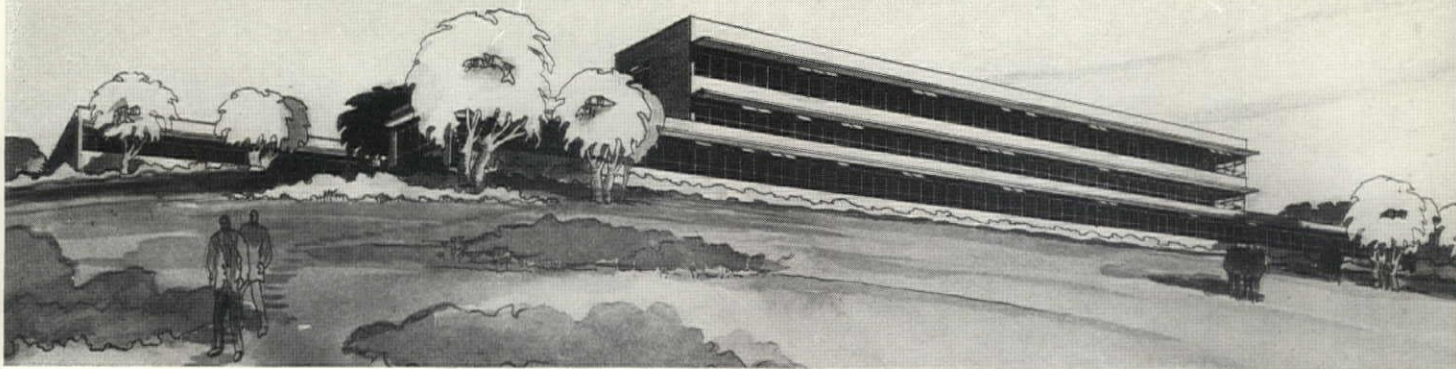
OFFICE ORGANIZATION

The office, with our engineering associates, has grown to a staff of over 60 people, and the increase in size has brought many problems. The partners believe that the best architecture does not come out of a front office-back office arrangement in which the principals deal with clients, make decisions, and send back to the chief draftsman vague notes and sketches for interpretation.

The entire office works as a team, with as much decentralization of authority as possible. As a result, the client deals directly with the man in charge of the job, with guidance and suggestions from the principals and any other member of the organization available for consultation. The staff architects thus gain experience in working with clients and also recognition from the clients for their essential contribution to the work. This training will aid them in their ultimate goal of setting up their own practice, and it has the further advantage of developing a much deeper interest in each project on the part of the architect in charge.

Every effort to promote collaboration and specialization among the staff is encouraged. A junior associate, Hubert Swanson, acts as coordinator and office manager. One architect, David Lovell, has been assigned the responsibility for research and mastery of hospital design. He attends conferences of hospital experts and collects and organizes data on the subject. Another junior associate, Donald Houpt, has made school work his major interest. Others have the same assignment for churches, residences, etc. It is physically impossible for any single individual to know the detailed requirements of the vast variety of buildings being planned today. By assigning the responsibility for specialization in a type of building to one person or a group of people in the organization, the office further breaks down the dominance of the principals and in collaboration each specialist adds to the whole the benefit of his highly specialized knowledge and techniques. Thus the school specialist collaborates with the hospital specialists in the design of classrooms in a large general hospital. Not only is thorough knowledge of his field required of each specialist, but also research, invention, and leadership.

The spirit within the organization and the pride of accomplishment is very strong. Almost every month there is an office party, picnic, or other meeting where we enjoy each other's company and discuss architecture, philosophy, politics, city planning, and the future of the office. Coffee is served in the office at ten in the morning and three in the afternoon to staff and clients alike. This provides a brief respite from work and an opportunity to compare notes, relax, and discuss informally some of the problems at hand. Many of the staff often spend an evening or two in the office working on projects



TWO HARBORS COMMUNITY HOSPITAL, TWO HARBORS, MINNESOTA. This 80-bed general hospital faces all patients' rooms toward the south, with services and administrative offices in the northerly wing. Delivery entrances, kitchen, storage, and laundry are on the ground floor. First floor (above) contains outpatient department separated from, but easily accessible to, rest of hospital. Patients' wing is typical on three floors.

without pay—not because they feel this will enhance their position but because they are interested and enthusiastic in developing a significant design.

For Professor Cerny the office is a laboratory for research where new ideas can be discussed and tried out on a practical basis. The result of this experience is brought to the students in the School of Architecture at the University of Minnesota, where they are taught that professional leadership pays—that in addition to professional competence, the architect must have a philosophy and the courage of his own convictions; that students are being trained not only in a profession which will sustain them but also to a responsibility which they must meet.

LONG & THORSHOV, INC.



THORSHOV



SHOTWELL



CERNY

The two buildings which are illustrated on the following pages are examples of the work which is being produced by this firm as a result of its philosophy and organization.

OFFICE BUILDING

ST. PAUL, MINNESOTA

LONG & THORSHOV, INC., Architects

ROBERT G. CERNY, Consultant

RALPH D. THOMAS & ASSOCIATES, Engineers

CLIENT: Paper Calmenson & Company, one of the largest steel fabricators in upper Midwest.

PROGRAM: Office building adjacent to plant. Executive and sales, engineering, and production departments all operate from central inventory system.

SITE: Outside city limits in pleasant environment; served by railroad; ample room for expansion.

PLAN SOLUTION: H-shape, with one leg containing locker rooms, toilets, plant manager and lunch rooms, placed directly against plant building. Production department in center stem. Executive and sales department to left of main entrance, engineering to right, in forward leg. Inventory system located at intersection.

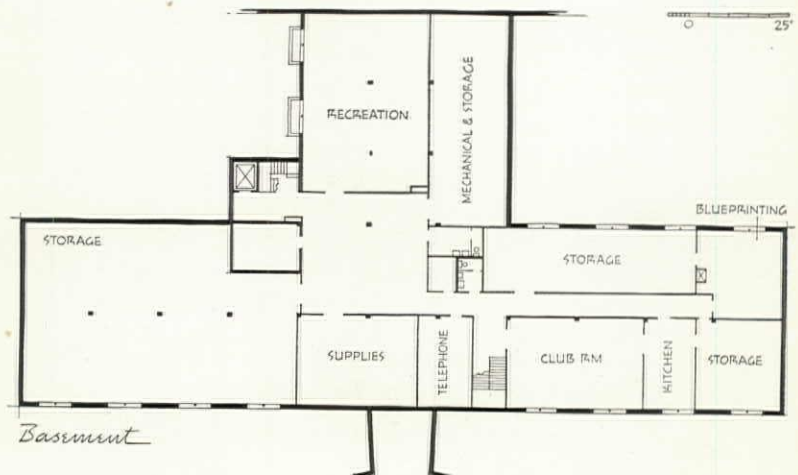
STRUCTURE AND MATERIALS: Steel frame; exterior walls brick and back-up tile, plastered inside. Asphalt tile on concrete floors. Directional glass block above projecting aluminum sash, glazed with double glass. Continuous fluorescent tubing in office area, set in acoustical ceiling.

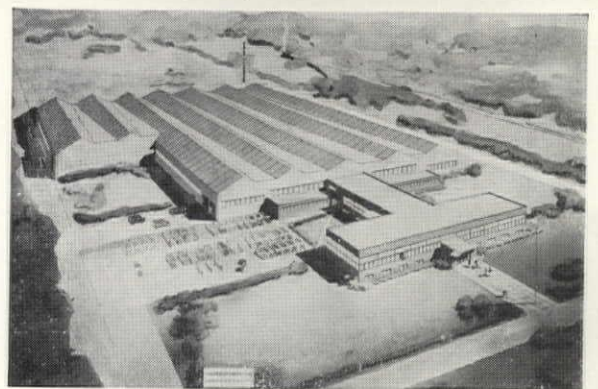
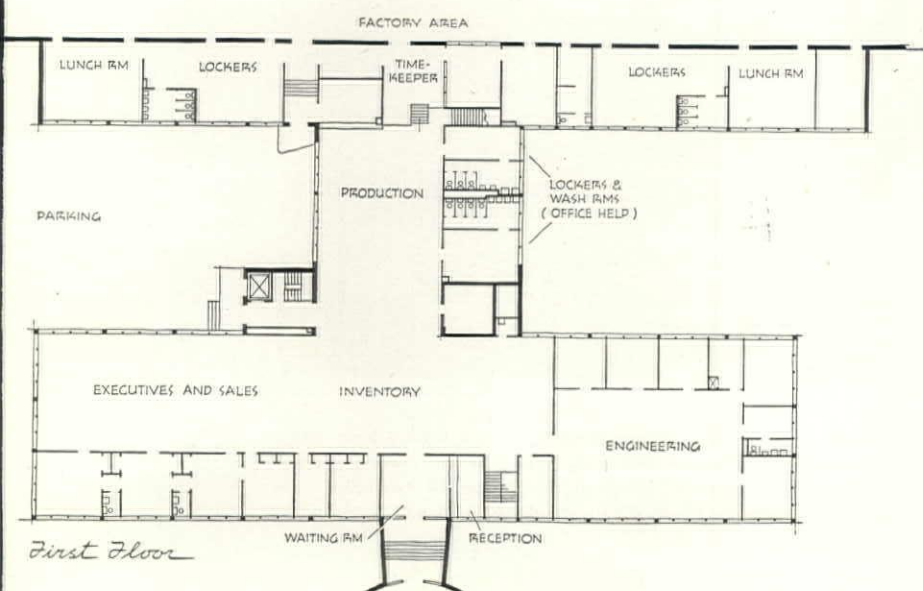


Hedrick-Bleising Photos

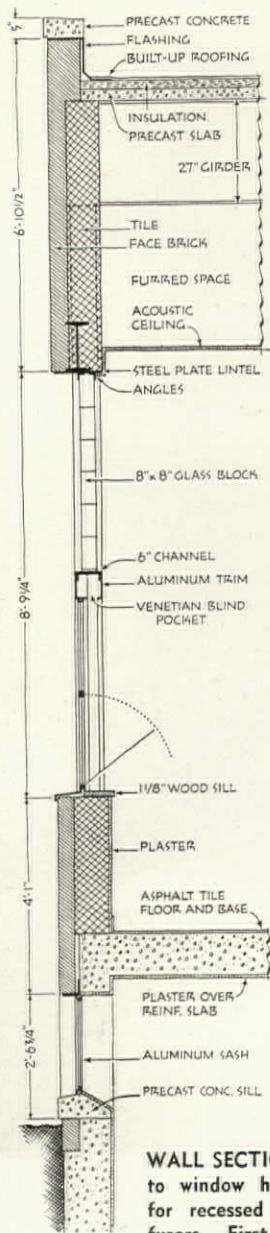
MAIN ENTRANCE. A cantilevered concrete slab protects the principal entrance to the building. Entrance projects enough for comfortable stairs inside, between interior and exterior doors.

PLANS. Basement contains storage, mechanical equipment, and employees' recreational rooms. Main floor plan is based on access of all departments to inventory files. Office arrangement gives ample light and ventilation to all individual offices as well as the larger general office areas. Connection with the fabricating plant is through the timekeeper's space in the rear, which also controls the employees' entrance. Parking space is convenient and ample.

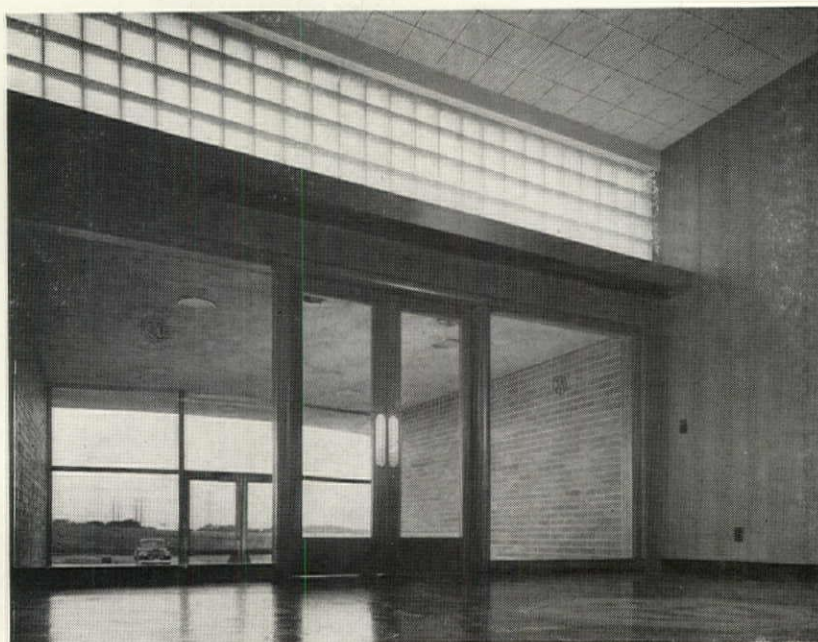




THE ARCHITECTS' RENDERING indicates the relationship of the office building to the plant itself, to the surrounding streets, and to the parking area. Above, in the photograph of the principal facade, note the well studied relationship of glass, glass block, and masonry surfaces.



WALL SECTION. Ceiling is furred to window heads, allowing space for recessed lights and air diffusers. First floor level is high enough to permit adequate light in basement.



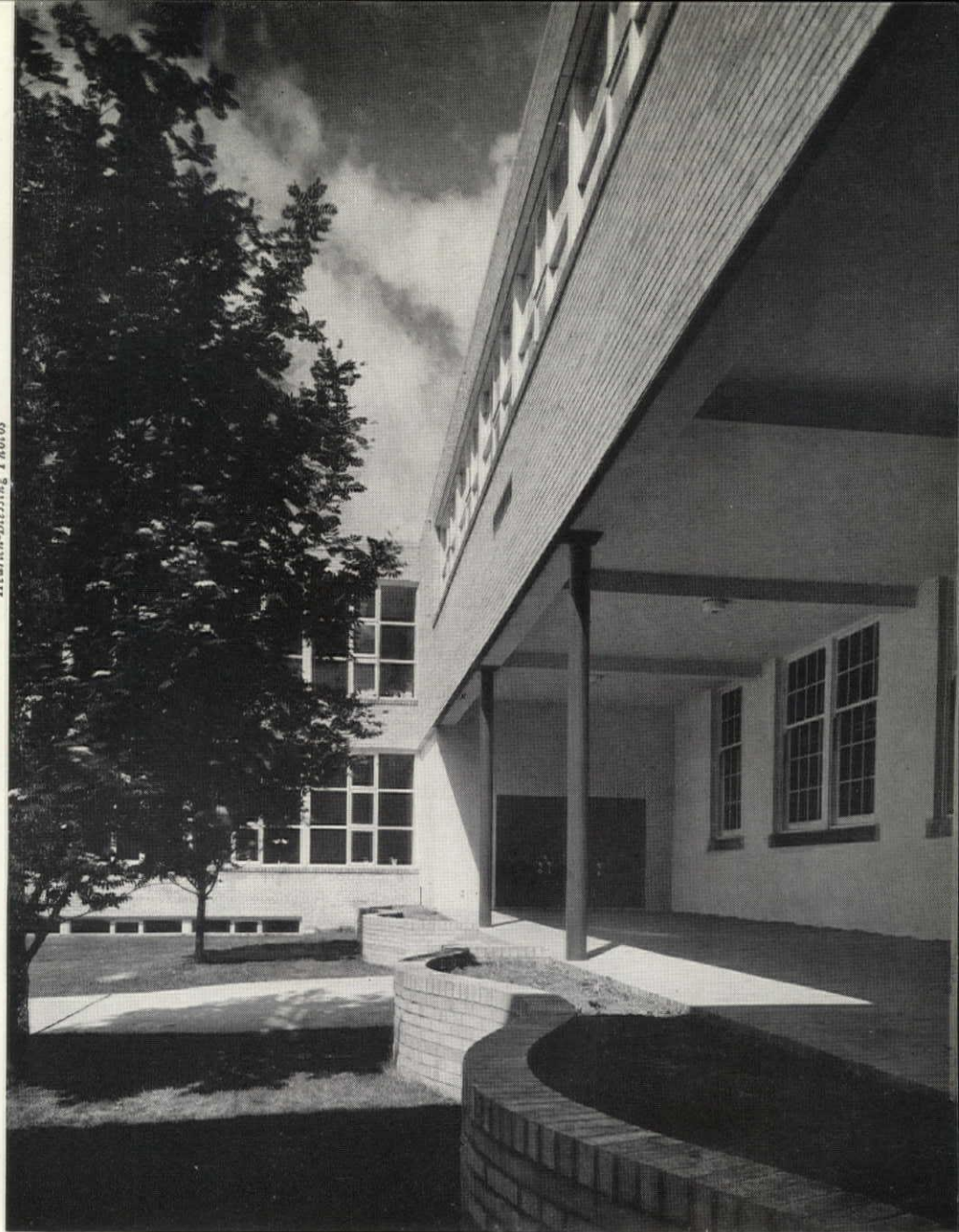
WAITING ROOM. Wide, fully glazed opening with directional glass blocks above produces an open, well lighted space.

OFFICE BUILDING, ST. PAUL, MINNESOTA

LONG & THORSHOV, INC., Architects



OFFICES. Glass blocks throw sunlight to the ceiling from where it is reflected down on the work area. Beams coming through clear glass windows fall short of desks, can be controlled with shades if necessary. Tests show even distribution and good quality of light.



SCHOOL ADDITION

RICHFIELD, MINNESOTA

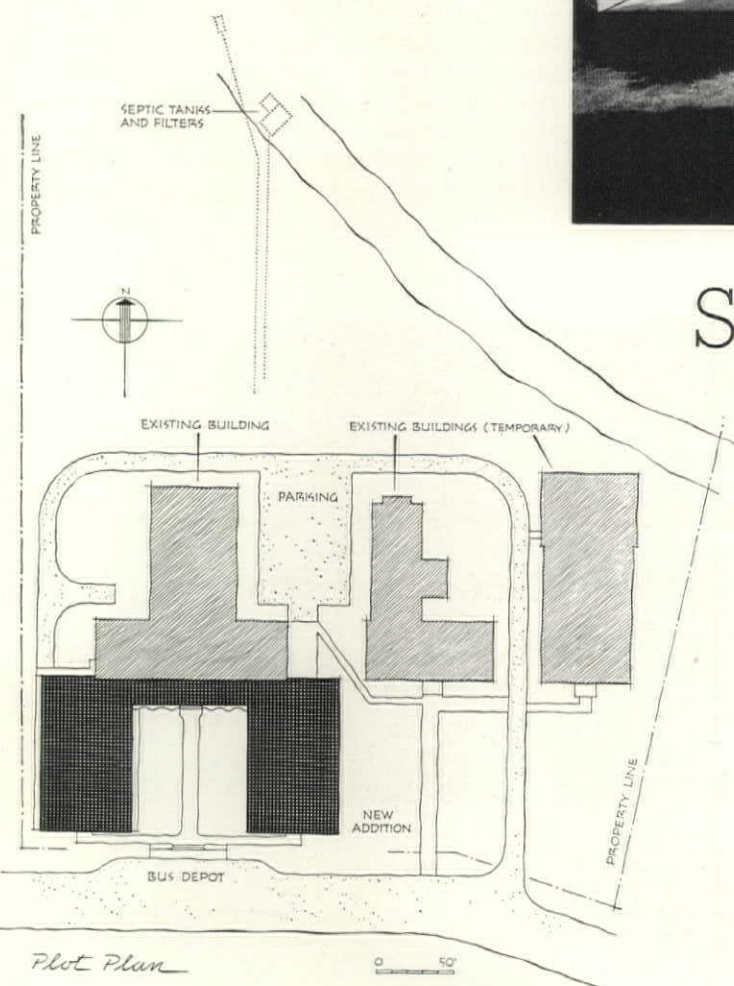
LONG & THORSHOV, INC., Architects

ROBERT G. CERNY, Consultant

RALPH D. THOMAS & ASSOCIATES, Engineers

PROGRAM: An addition to the Woodlake Elementary School in Richfield, consisting of 20 classrooms, library, and cafeteria unit.

SOLUTION: Two wings projecting from the existing school building, containing classrooms facing east and west. Entrance porch connecting these two wings, opening into them and into old portion. Library above entrance, accessible to all parts of building. Dining and kitchen facilities and "activity" rooms in well lighted basement.

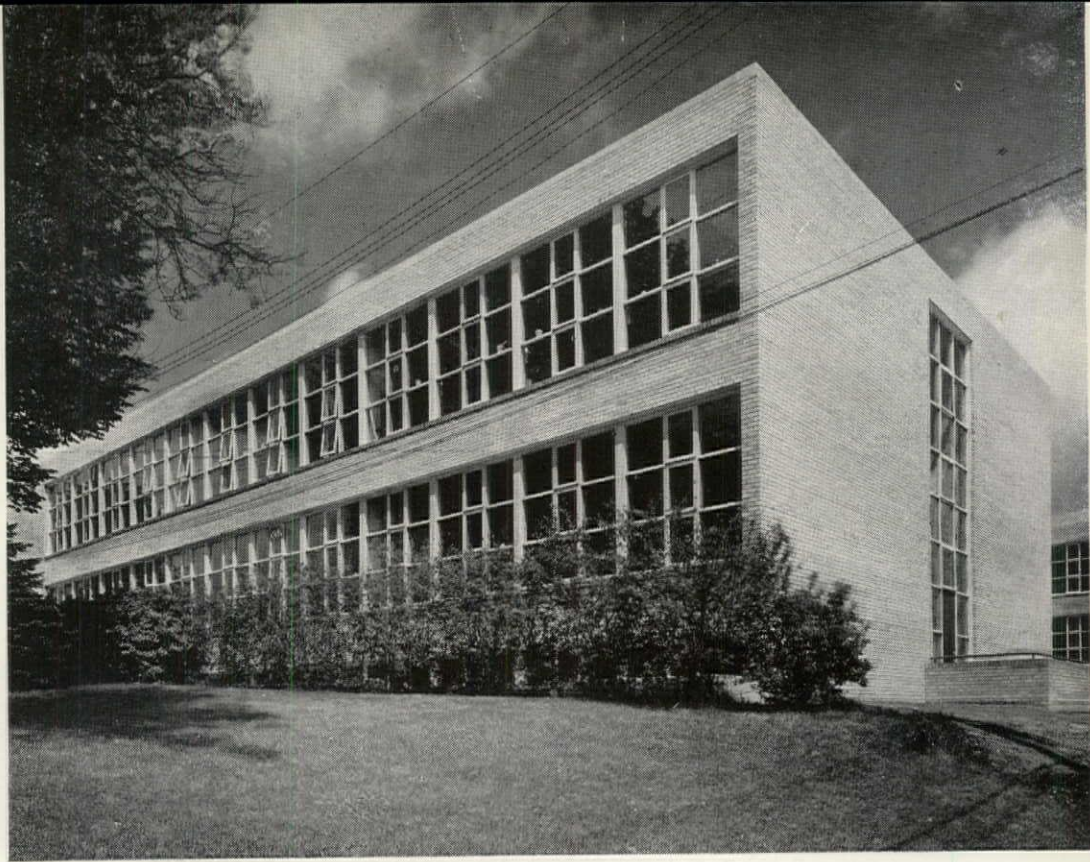


Plot Plan

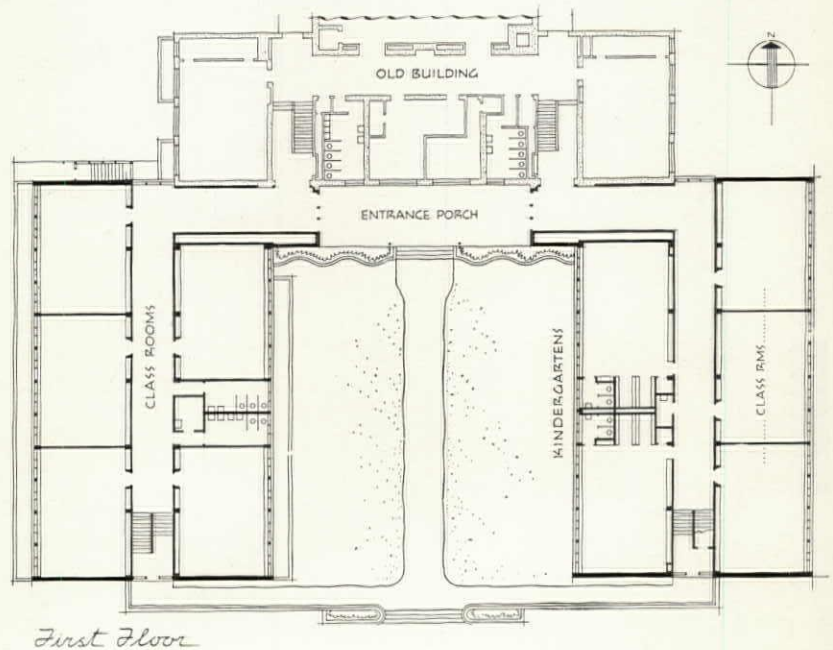
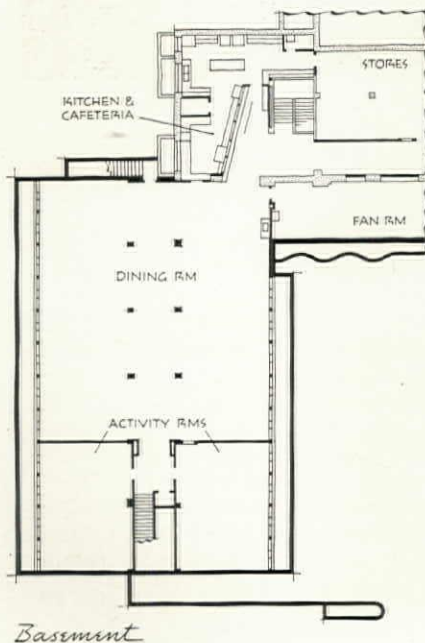
**SCHOOL ADDITION
RICHFIELD, MINNESOTA**

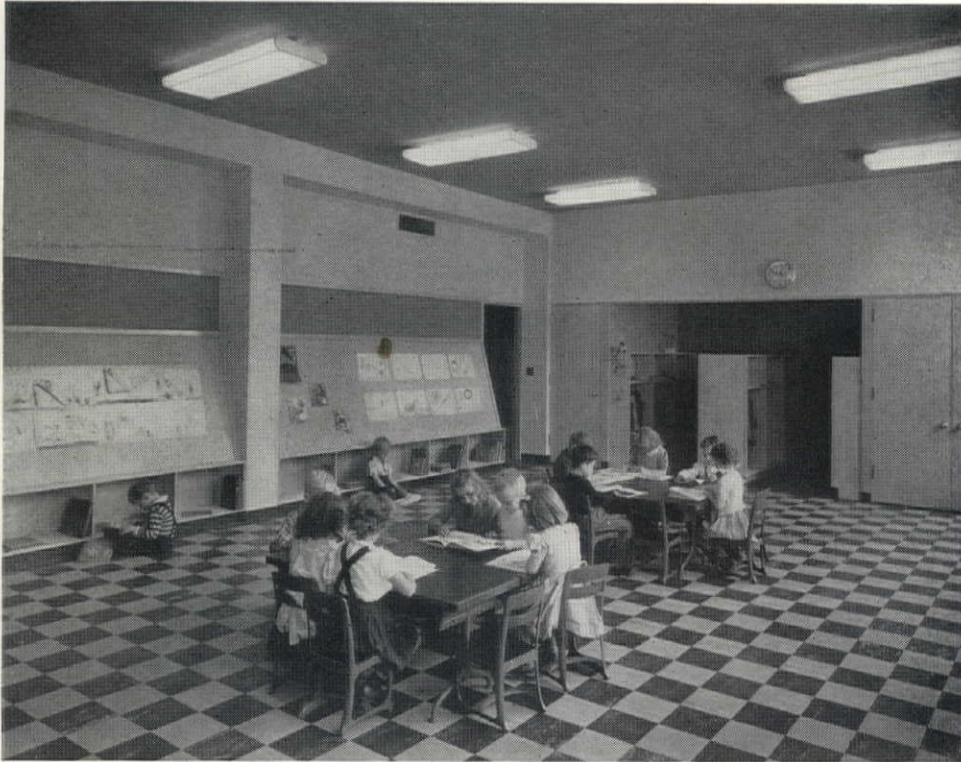
LONG & THORSHOV, INC.
Architects

The Superintendent of the Richfield school system likes particularly "the natural lighting facilities provided by the full banks of windows on one side of each classroom," and comments that "the pupils are happy in the homelike surroundings, the pleasing variety of bright colors. . ."

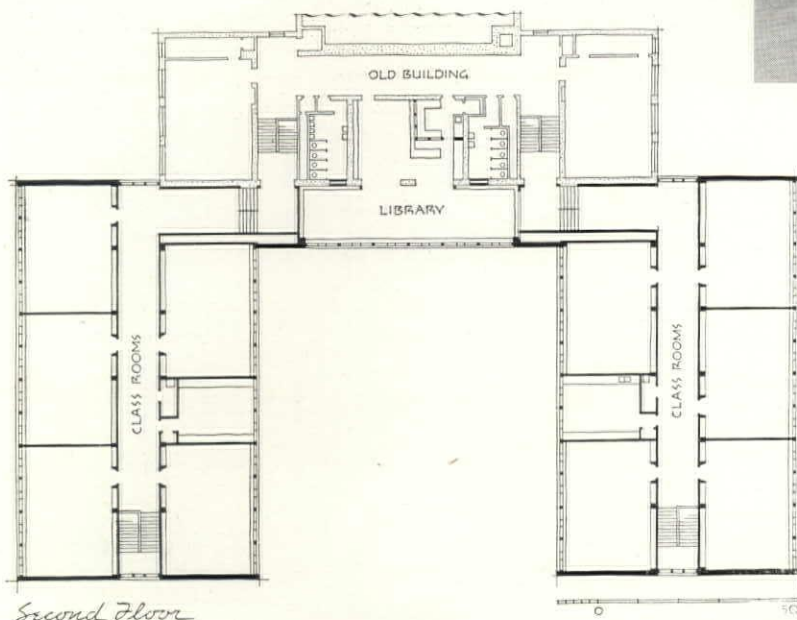
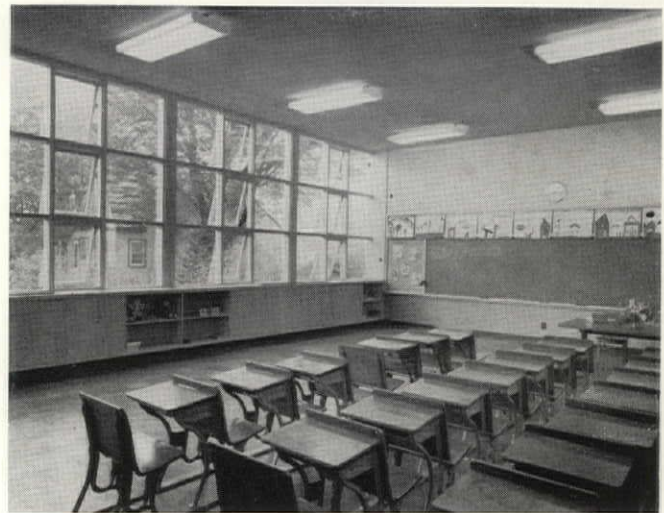


STRUCTURE AND MATERIALS: Combination of steel and reinforced concrete frame (steel columns on outside walls above basement, where maximum opening was desired). Superstructure walls 4" face brick backed up with 8" tile, plastered. Asphalt tile floors; acoustical plaster ceilings. Ventilation system operates from fan in basement, intake on roof; blows preheated, filtered air into classrooms from ducts in furred corridor ceilings, returns it at floor through wardrobes.

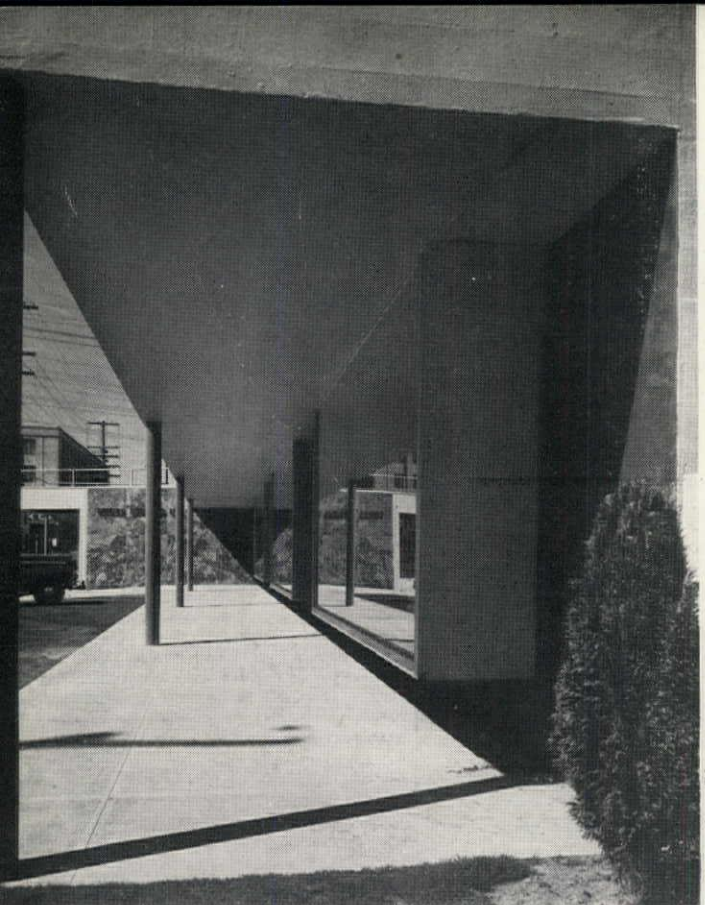




CLASSROOMS. In the kindergarten above and in the typical classroom at right, careful attention has been paid to cabinets, display cases, and clothes lockers (see Selected Detail on page 85). Natural lighting is supplemented in each classroom by eight 4-tube fluorescent units.



PLANS. Basement contains cafeteria and special workrooms, as well as mechanical equipment. Portion not shown is largely unexcavated. On first floor, two kindergartens in easterly wing are planned so that they have their own toilets and clothes alcoves. On the second floor, two workrooms have been incorporated in the plan. Library is conveniently located; rear portion receives clerestory light. Each new classroom wing has access to old building as well as separate entrance.



ENTRANCE PORTICO

P. A. Dearborn Photos

WHOLESALE BUILDING

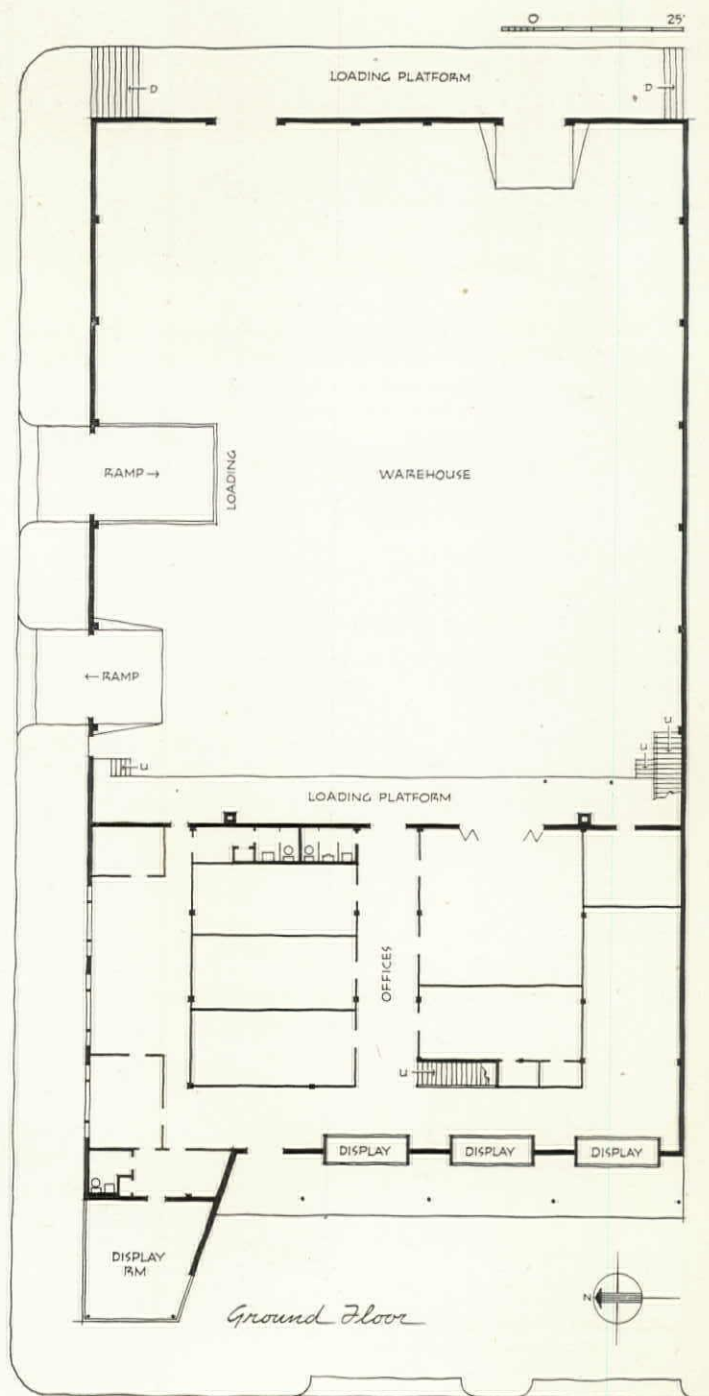
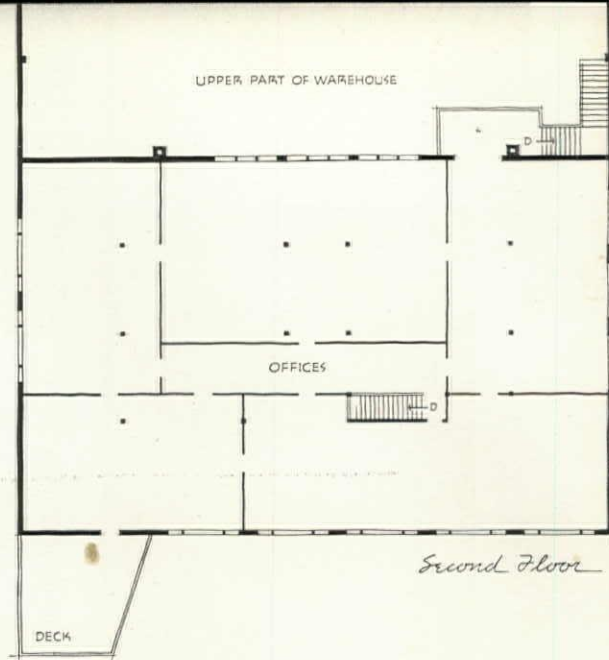
PORTLAND, OREGON

Offices — Display Rooms — Warehouse

PIETRO BELLUSCHI, Architect

PLANS: Setback of the building from the curb accomplishes several useful things—provides offstreet parking for customers; gives great prominence to the major display room, from both sidewalk and parking space, and sets the building apart from those that crowd the lot line.

The recessed ground floor provides shaded space for supplementary display units and sheltered passage from parked car to entrance door. On the first floor are business and administrative offices concerned with sales and warehouse activities. On the second floor are service departments, a sales theater, a model kitchen, and a conference room.





GENERAL VIEW

NEED: A building combining the functions of business offices, warehousing, and display space for an organization dealing in electric-powered equipment.

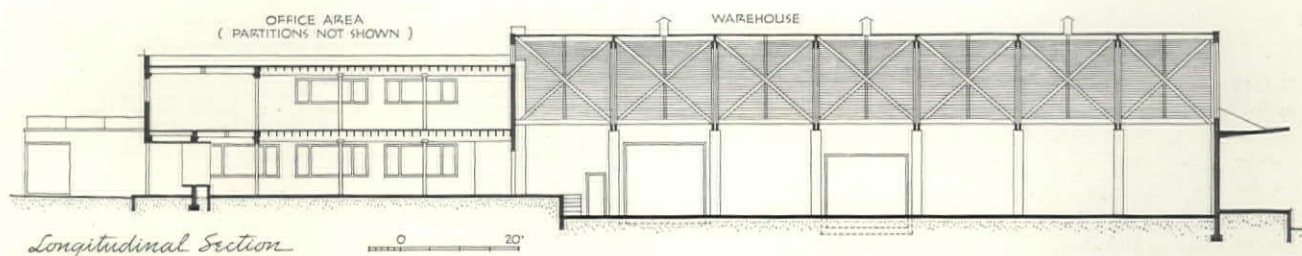
SITE: Corner lot in a wholesale district, near railroad trackage and facing a much traveled thoroughfare.

SOLUTION: Display, offices, service departments,

sales areas, in a two-story structure at front; warehouse, at rear.

MATERIALS: Reinforced concrete structure; display room wing surfaced with rainbow granite. Exposed pipe columns steel, 6" I.D.

COLORS: Main block of building painted white; recessed wall painted deep bottle green. Pipe columns painted blue. Lettering, yellow and red.



SECTION. Varied levels established in the warehouse provide comfortable working heights for outside trucking facilities at sheltered street dock at rear; undercover handling from side street entrances, and between loading platform at rear of two-story portion and warehouse proper. Detail of the warehouse timber trusses is shown over-page.



ENTRANCE. Approach sidewalk, with display wing surfaced with 4-foot squares of granite (at left), leads directly to the tempered plate-glass entrance doors.



Edris Morison Studio

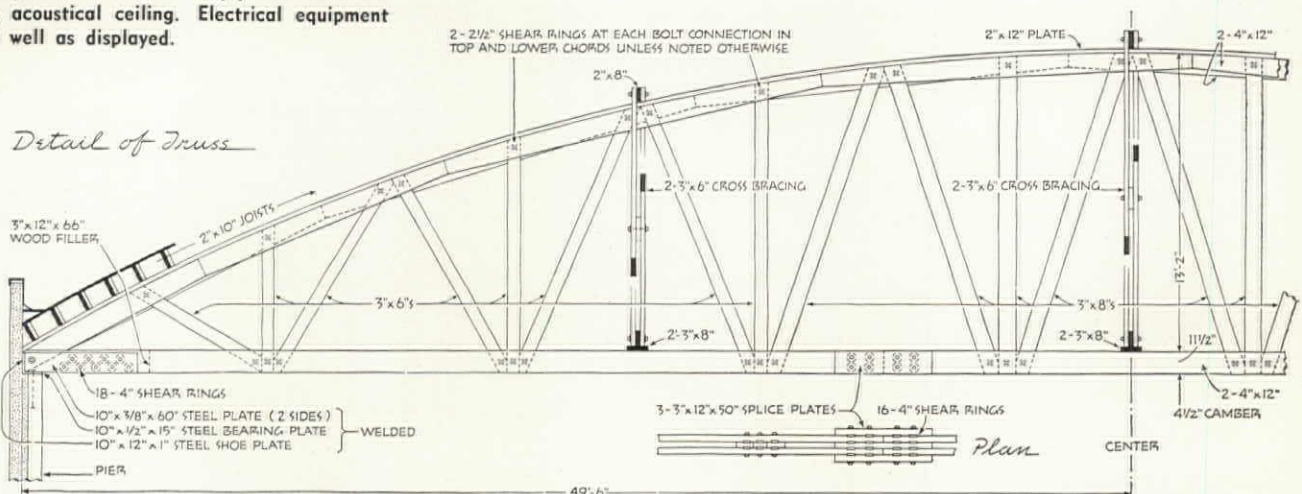
WHOLESALE BUILDING, PORTLAND, OREGON

PIETRO BELLUSCHI, Architect

THE ARCHITECT: Pietro Belluschi (for biographical notes, see May 1946 P/A) takes a rather critical attitude toward this job: "The design problem was not a complex one," he says, "since it is similar to that of many other wholesale establishments where the warehouse space is connected to offices and display rooms . . . While I don't consider the building a model of its kind, I feel that it does have a certain design elegance . . ."



LOBBY. Asphalt tile floor; birch plywood walls and partitions; acoustical ceiling. Electrical equipment is used as well as displayed.

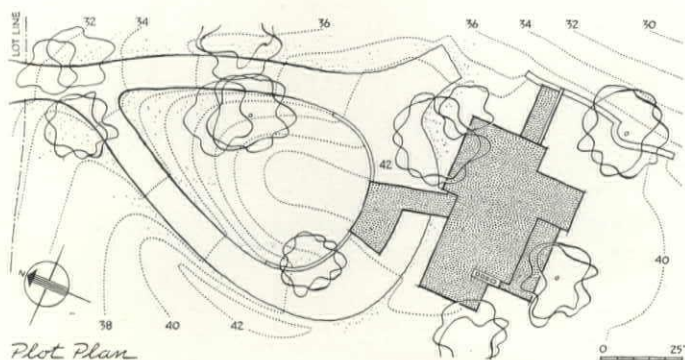


TYPICAL WAREHOUSE TRUSS (see section on preceding page) is 99 feet in length and rests on 16" x 16" reinforced concrete piers.



P. A. Dearborn Photos

This is the home of one of the architects—Mr. Richardson—his wife, and their two boys. Southern view front, top; northern, approach side, below. Mr. Richardson not only shared in the design but, in order to keep within the budget (\$16,000, including furnishing, as of 1941), he undertook the contracting as well.



HOUSE

CHARLES RIVER, MASSACHUSETTS

HUSON JACKSON and

JOSEPH P. RICHARDSON, Architects

NEED: Family of four and two guests; easy arrangements for entertaining and (frequently) servantless housekeeping; indoor-outdoor living; plenty of storage.

SITE: 2½ acres of abandoned pasture south of the road, with trees partly dictating house plan; driveway circling a hillock, and balanced cut and fill, got rid of a deserted gravel pit. Placing house just south of hill afforded protection from road noise and cold winds. Main living rooms open east, south, west, to views.

STRUCTURE: Traditional wood framing was employed to help in meeting the strict budget. Finish—for easy housekeeping, painted walls are eliminated except in baths and kitchen; no dust-catching trim.



PORTE-COCHERE serves also as the garage.



P. A. Dearborn Photos

SOUTHWEST SIDE. Red cedar clapboards are painted "Terra Verte."



ENTRANCE has bluestone floor to catch outside dirt.

HOUSE, CHARLES RIVER, MASSACHUSETTS

HUSON JACKSON and



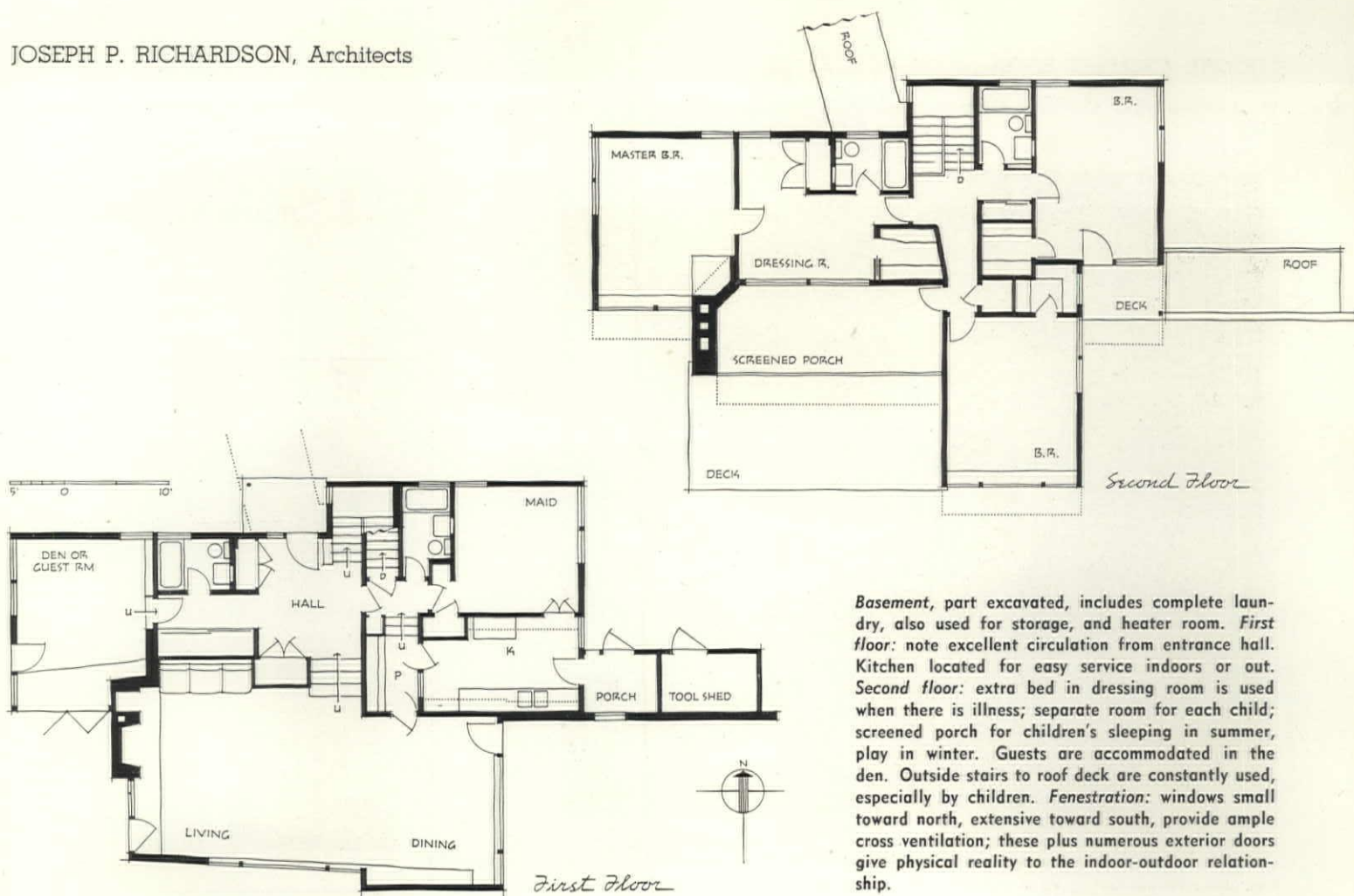
Paul Davis Photo

DEN-GUEST ROOM has brick floor to simplify caring for the indoor garden.



LIVING ROOM. No painted walls to clean; base flush with walls; no casings at doors or windows. "Housekeeping is easy."

JOSEPH P. RICHARDSON, Architects

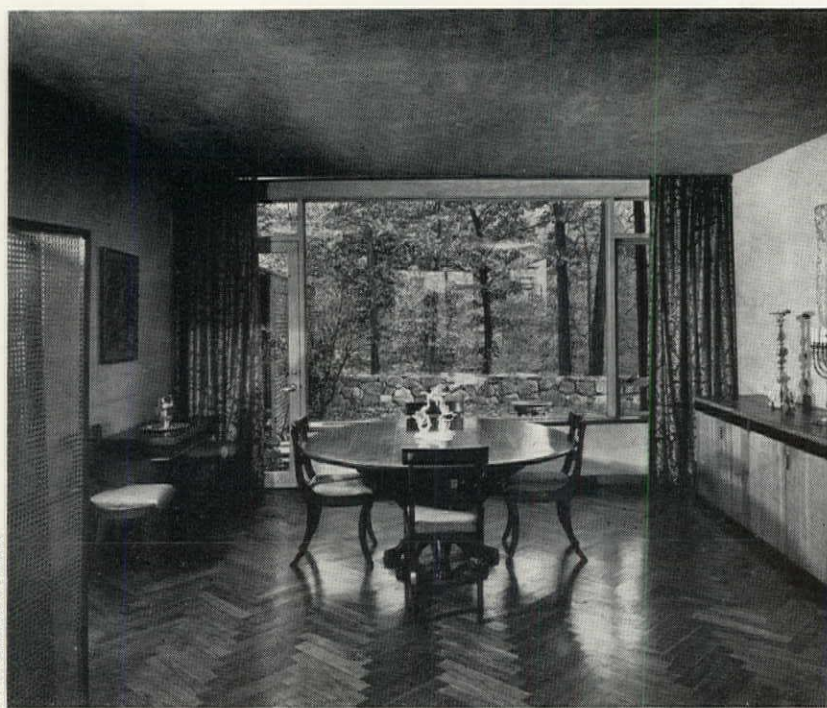


Basement, part excavated, includes complete laundry, also used for storage, and heater room. *First floor:* note excellent circulation from entrance hall. Kitchen located for easy service indoors or out. *Second floor:* extra bed in dressing room is used when there is illness; separate room for each child; screened porch for children's sleeping in summer, play in winter. Guests are accommodated in the den. Outside stairs to roof deck are constantly used, especially by children. *Fenestration:* windows small toward north, extensive toward south, provide ample cross ventilation; these plus numerous exterior doors give physical reality to the indoor-outdoor relationship.



SPACIOUS LIVING-DINING AREA, and numerous outside doors providing fluid circulation, made it easy to give a party for 150. Use of insulating plaster which

HOUSE, CHARLES RIVER.



P. A. Dearborn Photos

DINING ROOM walls are insulating plaster, unpainted; floors are white oak generally, walnut in living room. Millwork is unpainted mahogany in dining room, red cedar in most other rooms. During warm months meals are eaten outdoors.



RICHARDSON



JACKSON



has some acoustic properties is believed to improve tone value of the built-in radio-record player.

MASSACHUSETTS

HUSON JACKSON and JOSEPH P. RICHARDSON, Architects

Joseph P. Richardson, grandson of the renowned H. H. Richardson, is a graduate of the Harvard Architectural School. Following two years as assistant resident engineer on the White Building for the Mass. General Hospital for the firm of Coolidge, Shepley, Bulfinch & Abbott, he worked in partnership for a year or so with **Huson Jackson**. It was during this period that the house shown here was designed. After working as a contractor in the \$6,000-house field, he was in the U. S. Naval Reserve during the war. Since 1945, Mr. Richardson has been back with Coolidge, Shepley, Bulfinch & Abbott, at the present time particularly engrossed with the design of the huge Logan International Airport. Biographical notes on *Huson Jackson* were published in the October 1946 *PROGRESSIVE ARCHITECTURE*.



MASTER BEDROOM, dressing room beyond. Woodwork here is sycamore. Un-painted insulating plaster walls throughout the house afford a warm texture as a foil for the furnishings. Heating is forced hot water with built-in convectors.

HOUSE

ST. MARY'S, PENNSYLVANIA

RAYMOND VINER HALL, Architect

NEED: A year-round home for a couple with one servant; provision for frequent overnight guests and for group entertaining.

SITE: Level immediate area which, not far from the house, slopes away in three directions opening up to a panoramic view in almost 300 degrees of the compass.

SOLUTION: One-floor scheme arranged in a T, providing separate wings for living, sleeping, and service; living and bedroom wings opening to the lawns and views.

STRUCTURE: Combination of masonry and wood (2-inch vertical, splined planks, covered outside with alternate redwood and cypress boards, oiled); concrete slab floor containing radiant heating coils.

IN SUM: A sensibly organized plan developed into a highly individual design expression, derived from the materials and methods used. The owners are enthusiastic: "There are no features of the house that we would desire changed . . ."

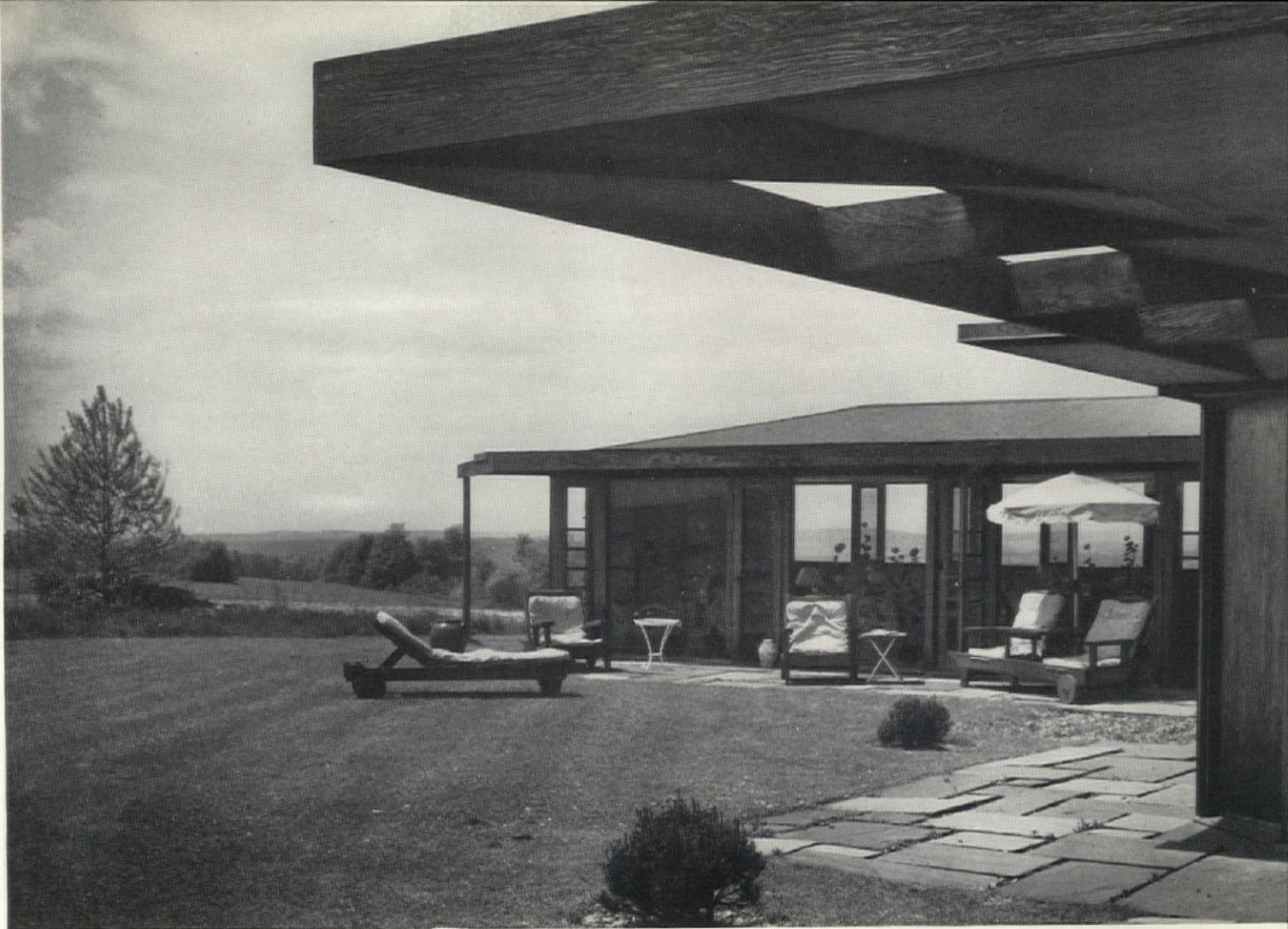


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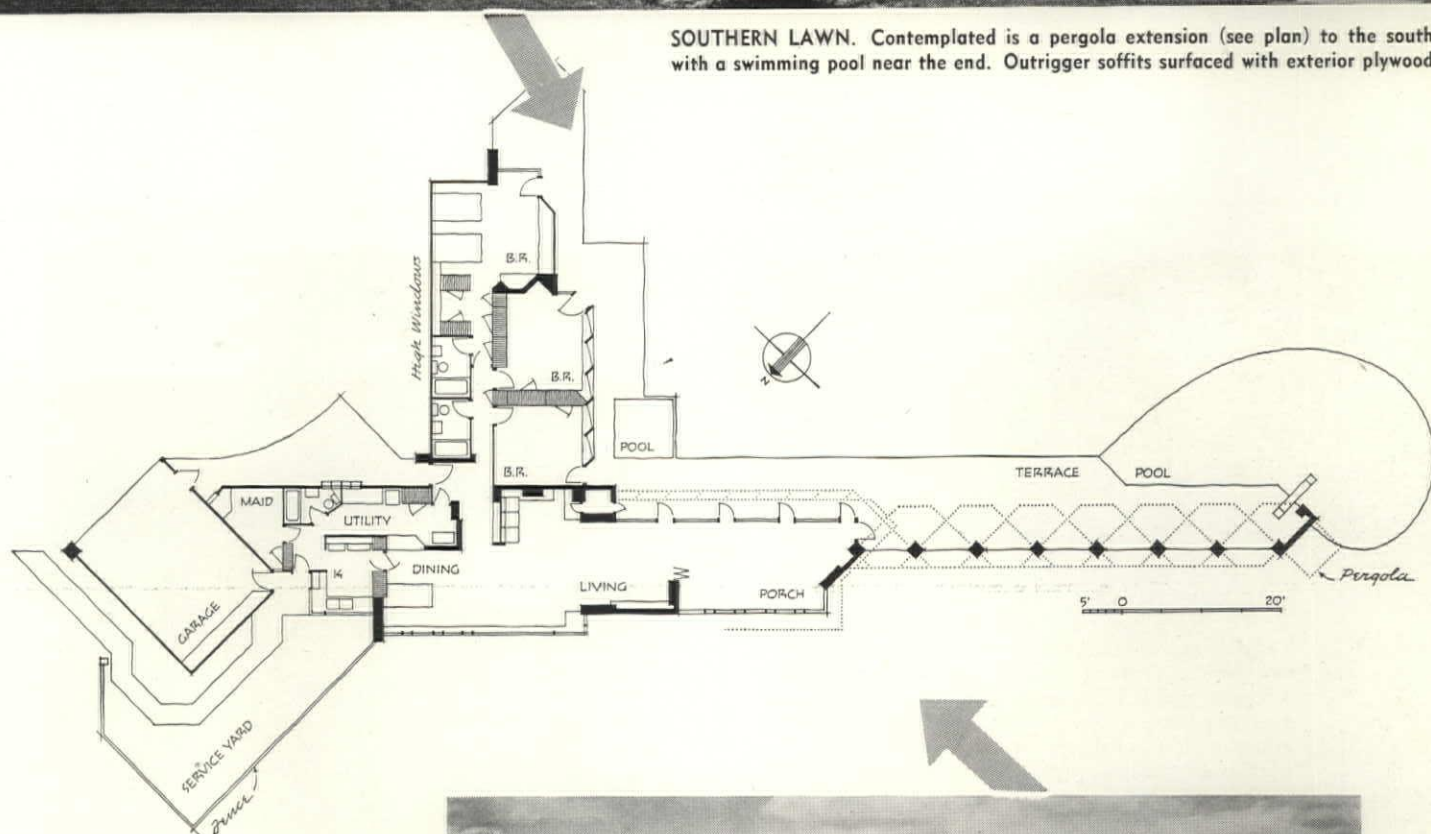
ENTRANCE. Passage from carport to front door.



VIEW FROM NORTHEAST. Bedroom wing, left.



SOUTHERN LAWN. Contemplated is a pergola extension (see plan) to the south, with a swimming pool near the end. Outrigger soffits surfaced with exterior plywood.



VIEW FROM SOUTHWEST. Dining-living room and porch open into one continuous area. Masonry masses are of sandstone, interspersed with projecting strips of bluestone to emphasize horizontality. In general, structural materials are also the finish materials throughout.





TERRACE. Doors open out to this area from the glazed porch (left), the living room, and each of the three bedrooms.

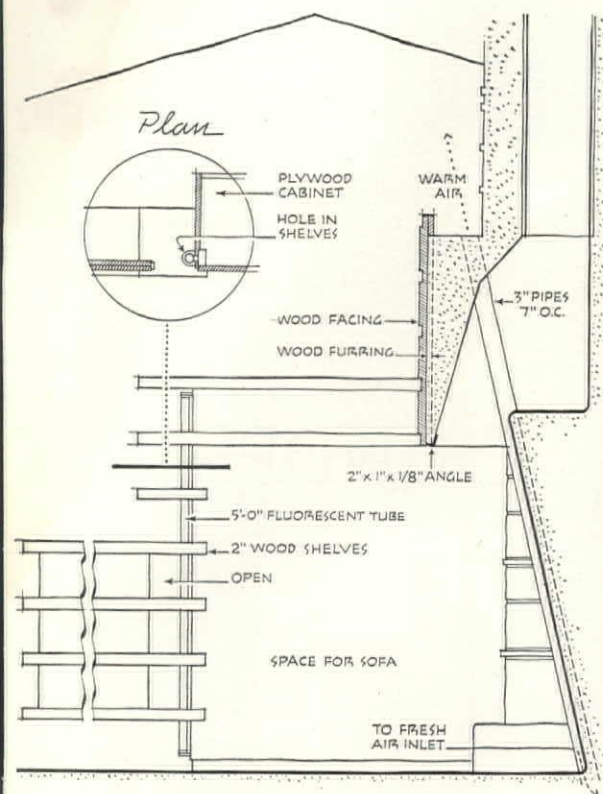
HOUSE, ST. MARY'S, PENNSYLVANIA



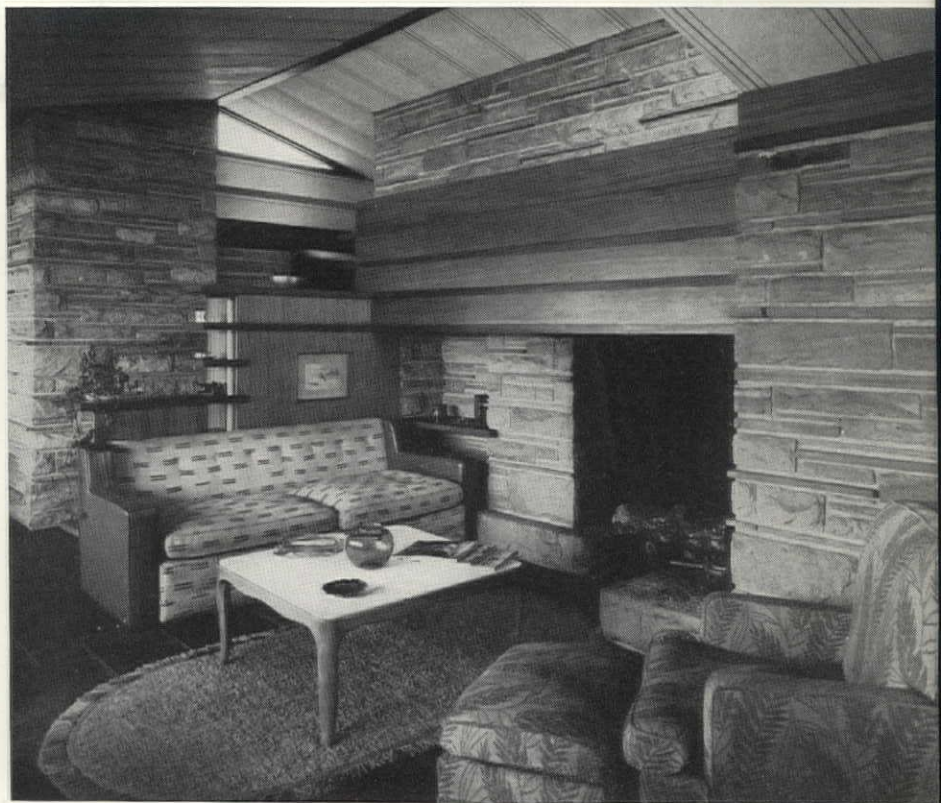
THE ARCHITECT. Raymond Viner Hall's training was varied and informal: apprenticeship in the building trades; a few "courses" at George Washington U.; immersion in writings and theories of Frank Lloyd Wright; work with his father (Walter J. Hall, builder of "Fallingwater"), and 3 years in "conventional" architect's office. Independent practice, interrupted by 3 war years' work with the Corps of Engineers, started in 1939. Currently Mr. Hall is serving as consultant on radiant heating practice with Bethlehem Steel Company.



PORCH. In most cases, ceilings (finished with fiberboard plank) follow the lines of the roof slope.

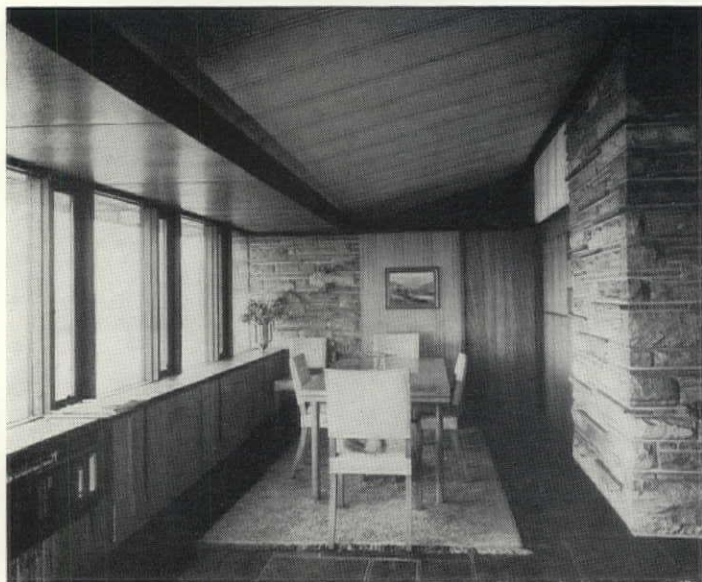


Section thru Fireplace 3/8" SCALE



LIVING ROOM. Low partition (a coat closet) behind the sofa screens the entrance hall. Projecting gable ends are glazed. A light strip is concealed behind the projecting overmantel.

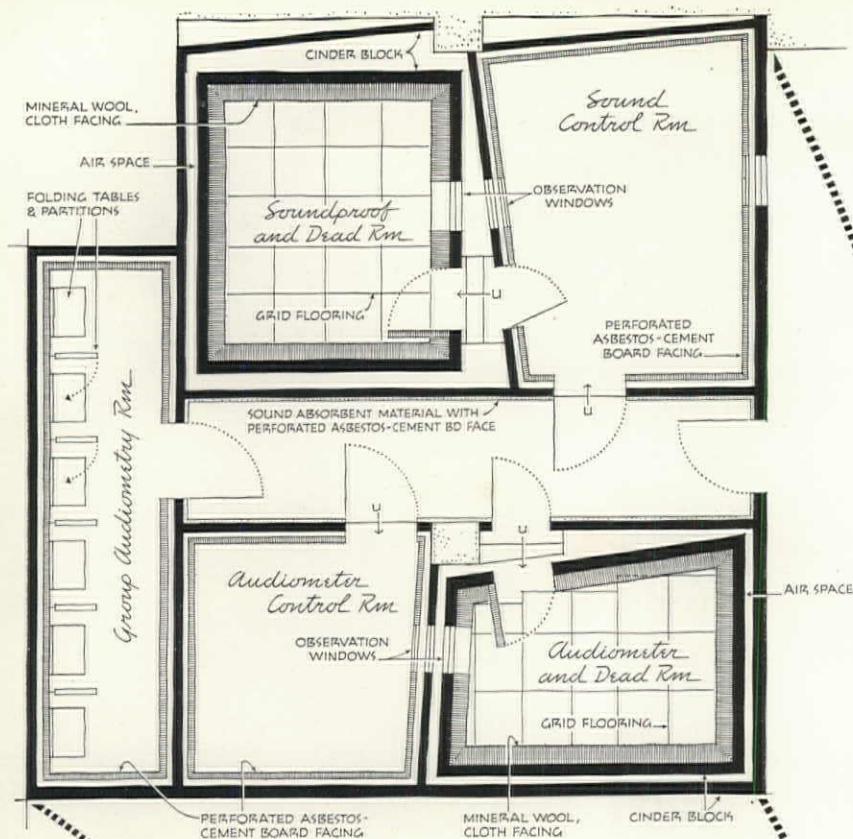
RAYMOND VINER HALL, Architect



DINING. Fluorescent lighting is concealed in ceiling soffits. In most areas, the floor slab is surfaced with bluestone.

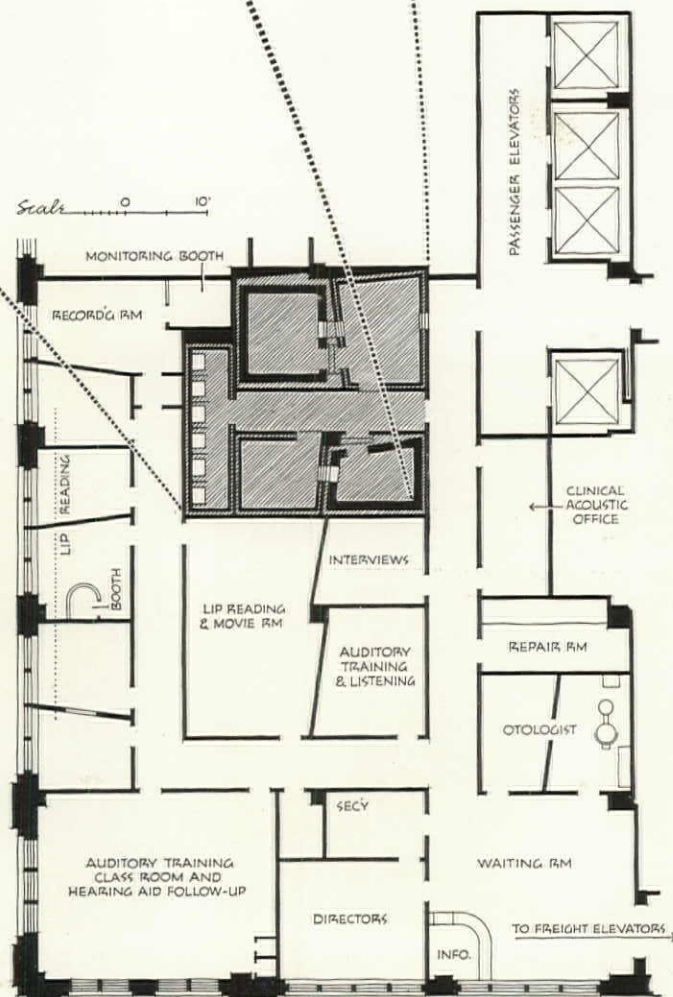


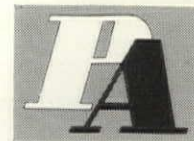
MASTER BEDROOM. High window strip (to the northeast) is composed of alternating fixed glass block panels and operable lights.



SOUNDPROOF

PLAN, SHOWING CLINICAL ACOUSTIC UNIT (described in text) in detail. The entire clinic is on the eighth floor of the Veterans Administration Regional Office Building, 252 Seventh Ave., New York, N. Y. It occupies typical office space, although its construction is far from typical. Note that the Clinical Acoustic Unit is in the center of the space, insulated against sound from outside the clinic by intervening offices, corridors, etc.





Materials and Methods

CONSTRUCTION for Aural Rehabilitation

THEODORE L. SOONTUP, Supervising Architect, Branch Office No. 2, Veterans Administration

MOE BERGMAN, Audiologist, Aural Rehabilitation Clinic, N. Y. Regional Office, Veterans Administration*

The particular example of a treatment suite illustrated here utilizes acoustical principles, methods, and materials developed as a result of experience in many types of buildings, adapted to attain the desired medical result. The limited ceiling heights available in typical office-building space necessitated some departure from what might be considered "ideal" solutions to acoustical problems; in this, there is a demonstration of the adaptation of the ideal to practical working conditions which should prove valuable. Also, the type of construction employed should be of value to designers faced with problems found in any spaces where complete control of sound is essential—radio studios, recording and sound stages, control rooms, etc.—where, although the end to be accomplished may differ and hence quantity and placement of

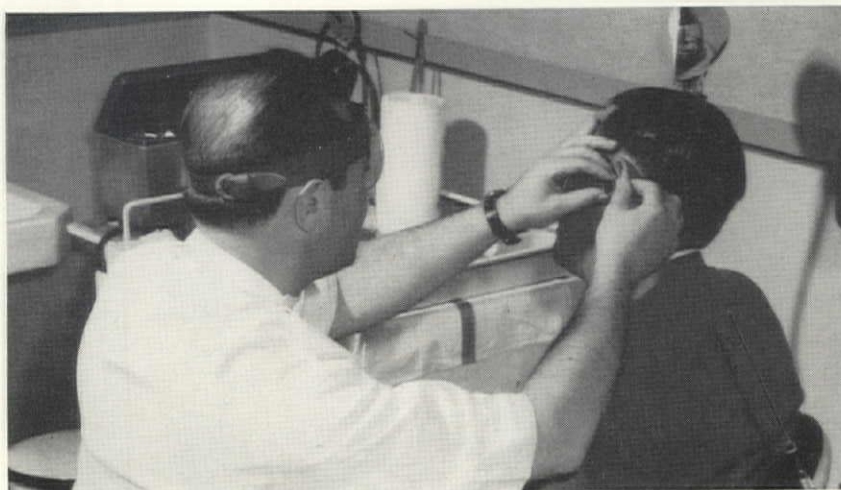
materials may be different, the methods of construction are substantially the same.

BACKGROUND

This is more than just a medical clinic, where cases of deafness or incipient deafness in men of the U. S. Armed Forces may receive treatment. In it has been concentrated the knowledge gained

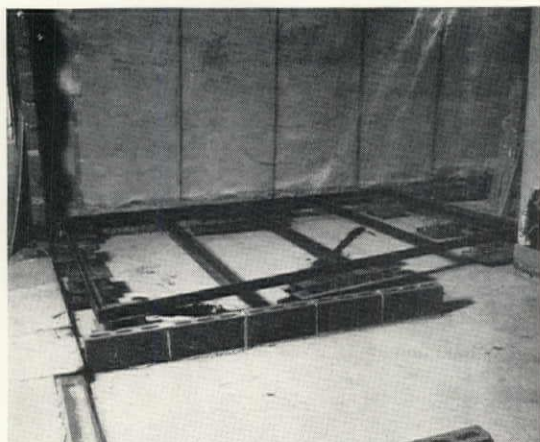
in previous Army and Navy programs; its existence may stimulate construction of similar units in private institutions. The program considers the deaf person as a total personality; that is, he is aided medically, educationally, technically, vocationally, psychologically, and sociologically to readjust to the normal world. If

(Continued on page 74)



Otologist conducting an ear examination

* Mr. Soontup, a professional architect, and Mr. Bergman, an acoustical expert, wish to acknowledge the assistance of W. P. Warendorff and Dr. E. P. Fowler, Jr., of Branch Office No. 2, Veterans Administration; M. Whitlock, Jr., of the Aural Rehabilitation Clinic; and J. Y. Dunbar of Johns-Manville Corp. The ideas and opinions expressed are those of the authors, not necessarily of the Veterans Administration.



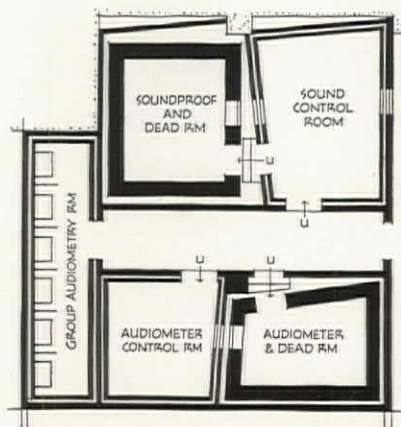
Construction of the sound-dead rooms requires complete structural isolation from the building. Here the framing for the floating floor is set on double springs, which in turn are placed on heavy felt.



Space between the two floors is completely filled with acoustical absorbent material.



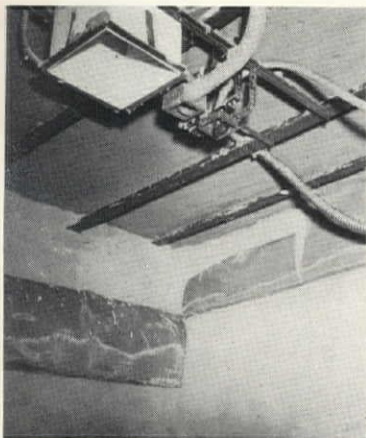
Backing material and metal reinforcing are laid over the framing before pouring the sound-isolated floor slab.



PLAN, CLINICAL ACOUSTIC UNIT. The Soundproof and Dead Room and the Sound Control Room are used together. In the control room electro-acoustic equipment is controlled by a technician while in the dead room the patient sits during tests to select his hearing aid. The Audiometer and Control Room and the Audiometer and Dead Room have dual functions: they can be used together for the same purpose as the pair described above, although their prime purpose is for monaural audiometric tests, in which case the two are used singly. This explains the different arrangement of doors, etc. They also have other functions: for instance, the dead room serves as an anechoic chamber for evaluating hearing aids. The Group Audiometry Room is used independently, accommodates up to six patients at one time. Note placement of corridor to act as a soundlock.

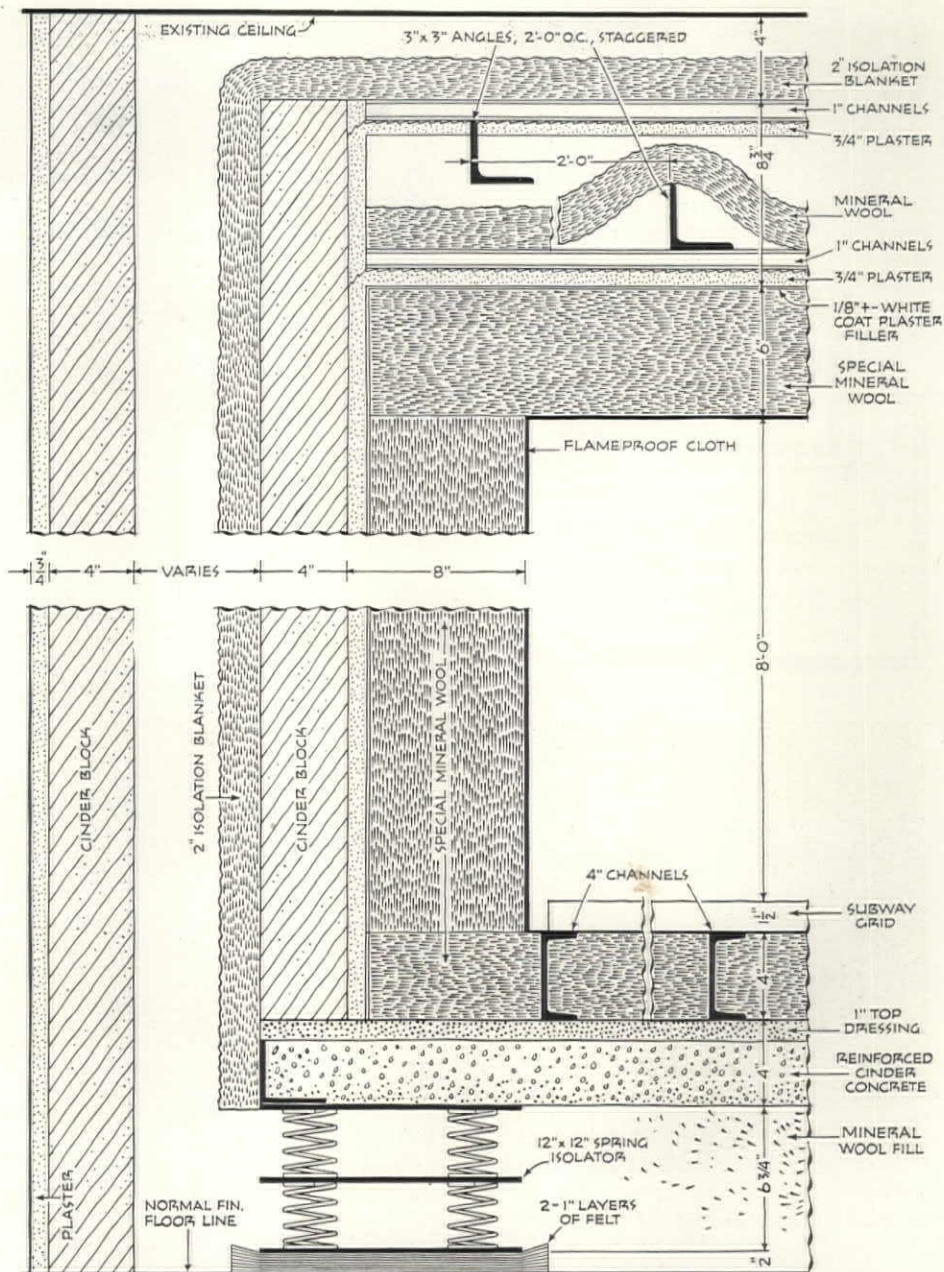


Cinder concrete floor slabs poured; note isolation from building floor and also from surrounding walls.



Ceiling isolation in sound-dead rooms

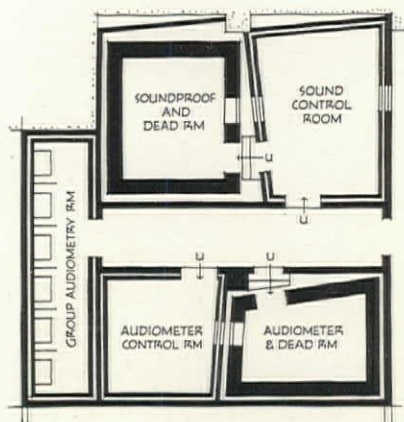
SECTION, DEAD ROOMS. These had to be completely isolated from side walls, floors, and ceilings to prevent any possible conduction of sound through the structure. The rooms had also to be electrically shielded with copper screening to overcome disturbances due to ungrounded fluorescent lights, electro-therapy equipment, and other sources. The shield is grounded to cold water piping and to the building's structural steel. If rooms had not been shielded it would be impossible to make accurate sound measurements or to reproduce a patient's sound environment faithfully. Outside noise might also have been transmitted through electrical conduit; to avoid this, Greenlee cable was used, with one inch of felt inside the cable box.



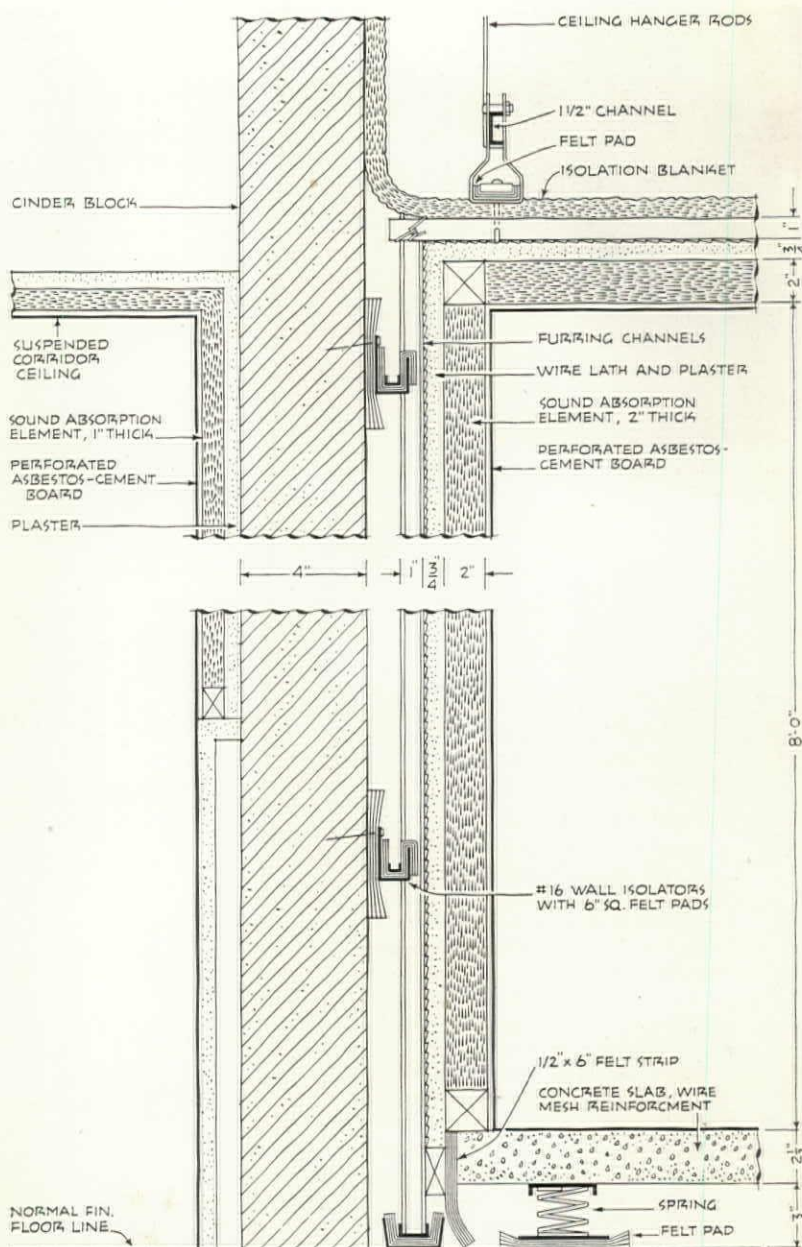
Wall construction; application of special mineral wool. Note use of building paper against cinder block wall to catch construction debris. This maintains complete sound isolation and prevents accidental grounding of the copper screen (rolled at lower left; also vertical at rear).



Copper mesh screening on wall of dead room to shield against electrical interference. Doors were also covered with the screening and were equipped with copper straps to make contact with the wall shielding when the doors were closed.



CONSTRUCTION OF THE TWO CONTROL ROOMS, though lighter because the requirements for sound elimination were less exacting, was essentially the same as for the dead rooms.



we concentrate here upon the more unusual constructional aspects, that is not to diminish the importance of the clinic as a whole.

PROGRAM REQUIREMENTS

Upon entering the clinic a veteran finds himself in a sound-treated reception room, where he is started on a series of tests and examinations. In special sound-isolated chambers his hearing is evaluated for purity of tone, for speech, and for conversational efficiency under conditions artificially created to approximate closely those under which he lives and works daily. On the basis of

these tests specialists determine his need for aural rehabilitation and for a hearing aid. If he needs it he receives a four-week rehabilitation course which includes lectures, lip-reading classes, special training techniques, speech correction, and voice training. His progress is recorded electrically, which requires a recording studio. The selection and use of the proper hearing aid, an extremely important part of the program, has special space requirements. And in addition to these treatment facilities, it was desired here to accommodate an ambitious research program for developing and evaluating new techniques,

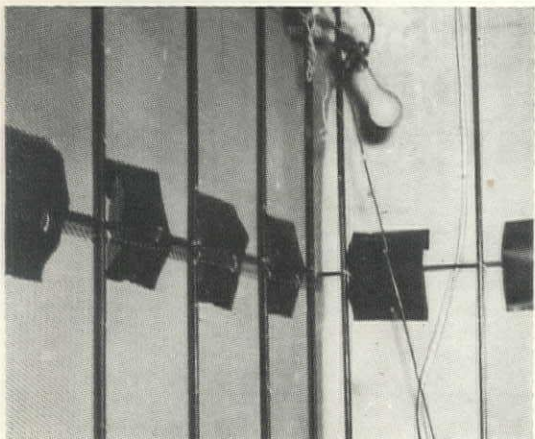
new materials, and new aids to hearing. This demanded ideal, calibrated conditions.

The functions of the unit thus become:

- To rehabilitate the deaf
- To correct deafness
- To instruct in lip reading
- To correct deteriorated speech and voice
- To provide for research.

The spaces required are:

- Administration Unit
- Otological Examination Unit
- Clinical Acoustic Unit (hearing evaluation and hearing aid selection)



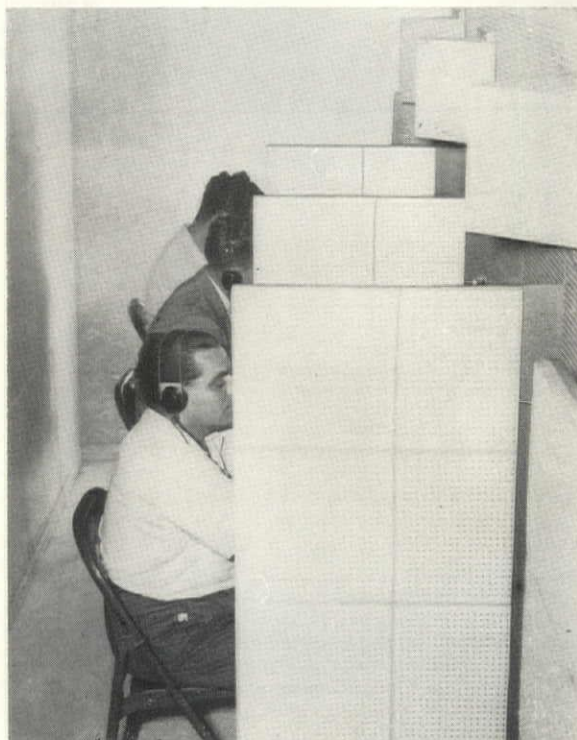
Wall isolators support the framing for the control room interior walls.



Spring isolators for the control room floors are single (rather than double as in the dead rooms) but otherwise floor construction is the same. Springs rest on felt 2" thick.

- d. Recording Unit
- e. Auditory Training Unit
- f. Lip-reading Training Unit
- g. Speech Correction Unit
- h. Psychiatric Unit.

While all the units required some degree of special treatment to control sound, the rooms comprising the Clinical Acoustic Unit, including a sound control room, soundproof and "dead" room, audiometer and "dead" room, audiometer and control room, and group audiometry room, are the most completely sound-conditioned and are most fully detailed here.



GROUP AUDIOMETRY ROOM in the Clinical Acoustic Unit has booths separated by acoustical fiber board panels which can be swung flat against the wall. Note the perforated asbestos-cement board walls.



IN THE AUDITORY TRAINING CLASSROOM, which is not part of the Clinical Acoustic Unit, the ceiling is serrated, built of perforated asbestos-cement board above which is an acoustic blanket to absorb sound.

STREAMLINED SPECIFICATIONS

KALAMEIN WORK .. and .. ROOF DECK

HENRY L. BLATNER
Architect

Herewith PROGRESSIVE ARCHITECTURE presents two short sections of a specification written by the architect for a particular job, the Arcade Theater, Salisbury, Maryland. These sections are so developed that they are generally applicable, and form a valuable addition to the continuing series of streamlined specifications. In order to increase the usefulness of these pages, sufficient space has been left in the right-hand columns for notes, addenda, or changes which the user may wish to insert in adapting the base specifications to his own work.

KALAMEIN WORK

Space for notes, addenda, changes

1. GENERAL CONDITIONS:

- A) **Hereby made a part of this specification.**
—contractor to read same carefully.

2. SCOPE:

- A) **All kalamein and metal-covered woodwork** as required by or inferred from drawings or specifications.

3. CUTTING AND PATCHING:

- A) **Of all kalamein and metal-covered woodwork** as required for the work of any or all trades.
—make shop provision for holes and openings wherever possible.

4. SHOP DRAWINGS:

- A) **Prepared by this contractor** showing details of construction and interpretation of design drawings.
—submit in triplicate for approval.
—correct and return if required.

5. MATERIALS AND APPLICATION:

- A) **Wood Cores.**
—first quality, kiln dried, selected clear white pine, California redwood or Washington red cedar.
—free from shakes, loose knots or other imperfections.
—shaped to conform with details as shown.

- B) **Panels.**
—standard 3 ply, laminated, surface veneered with fir or equal.
—3 ply composition panels in flush doors.

- C) **Metal Covering (Doors and Trim).**
—not less than #24 gage, zinc coated, copper bearing steel sheets.
—factory prime all metal covered work with approved metallic primer.

- D) **Ornamental Kalamein.**
—aluminum with "alumilite" finish of gages indicated on drawings.
—standard #4 finish in accordance with sample to be approved by Architect.

- E) **Application of Metal Covering and Ornamental Kalamein.**
—draw metal over wood cores through dies and clamp metal firmly around cores.
—firmly glue metal to panels under pressure with waterproof glue for permanent adhesion.
—finished work true and sharp with perfect mouldings, arrises, etc., and free from imperfections, face joint defects, etc., after painting.
—allow for unequal expansion of metal and wood in assembling.

- F) **Schedule.**
—Metal Covered Doors.
—as shown on drawings and complete with metal covered jambs, head and trim two sides unless otherwise noted.
—Ornamental Kalamein.
—as shown on drawings and including the following specifically:
—Box Office.
—Display Frames.

ROOF DECK

Space for notes, addenda, changes

1. GENERAL CONDITIONS:

- A) **Hereby made a part of this specification.**
—contractor to read same carefully.

2. SCOPE:

- A) **Any or all labor, material or appliances** necessary to completely furnish and install precast concrete roof decking or steel roof decking as required by drawings or specifications.

3. PRECAST CONCRETE ROOF DECK:

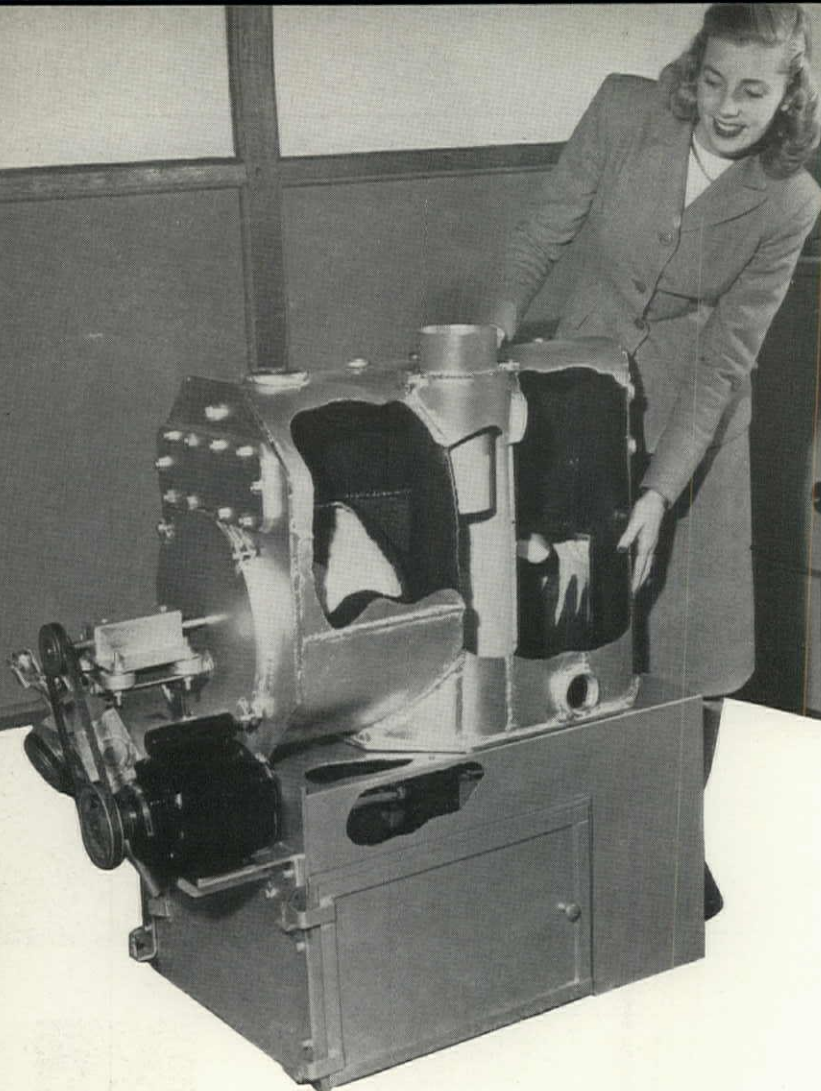
- A) **Cantilite** as manufactured by Concrete Plank Co., Inc., or approved equal.
—designed and constructed for maximum purlin spacing of 8'-0" with total uniformly distributed load of 60 lbs. per sq. ft.
—minimum thickness 2¾".
—maximum weight—18 lbs. per sq. ft.
—constructed of nailable lightweight concrete with all materials conforming to ASTM requirements.
—reinforced ¼" from each face with galvanized cold-drawn steel wire ASTM:482-34 running full length of plank with transverse wires spaced 12" o.c. maximum.
—tongue and groove 2 sides.
—necessary galvanized metal steel beam clips.
- B) **Install concrete plank** as follows:
—minimum 2 steel purlin or beam bearings.
—minimum 2 steel clips to each plank at each supporting steel purlin or beam.
—carefully handle plank to prevent chipping or cracking.
- C) **Cutting and Patching.**
—of all precast concrete plank to accommodate the work of any or all trades which may pierce or be applied to roof deck.
- D) **Grouting.**
—all joints between plank.
—approved mix of Portland cement or roofers cement grout.

4. STEEL ROOF DECK:

- A) **Shop Drawings.**
—Prepared by steel deck manufacturer.
—show type, quantity, shape, location and installation details for all steel decking.
—submit to Architect in triplicate for approval.
—correct and return if necessary.
- B) **Deck**—Standard type of approved manufacture.
—1½" standard steel roof deck.
—20 U.S. Standard gage minimum.
—fabricated, interlocking members presenting smooth upper surface.
—shop coat as follows:
—clean all steel surfaces.
—rust resistive, oven baked shop coat.
—field paint as follows:
—clean off all abrasions to shop coat after installation is complete.
—touch up abrasions and field welds with shop coat material.
- C) **Cutting, Framing and Patching.**
—large, predetermined openings.
—prefabricate self-supporting sections of decking as required to fit openings for equipment shown on drawings.
—minor openings and holes.
—cut steel deck as required for the work of any or all trades.
- D) **Erection.**
—In accordance with recommendations of the manufacturer and the National Assoc. of Fire Underwriters.
—by mechanics skilled in the erection of steel decks and under the direct supervision of the manufacturer.
—to provide against uplift of 30 lbs. per sq. ft.
—minimum deck length to span continuously over 2 supports.
—erect all decking in smooth, level manner ready to receive insulation.

5. ROOF DECK SCHEDULES:

- Precast concrete plank or steel.
—entire auditorium roof area.
—entire projection booth roof area.



Axeman - Anderson's "AA Anthratube," cutaway (left) and jacketed (right). D. L. & W. Coal Co. model is similar. Both are easily installed, approach closely the 80% efficiency of the original laboratory model (contrast with 50-65% efficiency of an average "furnace") and permit coal savings of 15 to 38%.

What Is the ANTHRATUBE?

The severity of this winter in many parts of the U.S.A. heightens interest in any heating plant designed to utilize fuel more efficiently and completely than the average. During the war Anthracite Industries, Inc., hard coal trade association, was doing research on the application of forced-draft, forced-feed principles to anthracite. In 1944 they came up with the Anthratube, an exceedingly compact heater formed from a simple metal tube. A screw feed forced coal into one end of the tube, while air entered at the ash end, drawn by a suction fan which literally pulled air through the fire and the entering fuel, thus preheating the coal and increasing the intensity of the fire. Around the tube was a water jacket through which a pump forced water in order not only to provide steam or hot water for heating, but also to cool the fuel sufficiently to prevent formation of clinkers. A single motor furnished power for all three mechanisms (coal screw, air fan, and water pump) and the whole mechanism could fit into a space 2 ft by 2 ft by 3 ft. The tube itself was only 18 in. long and 6 to 8 in. in diameter.

This small size was made possible because the Anthratube utilized a different combustion principle than the usual "furnace." In a furnace coal burns slowly in a large firebox; in the Anthratube, coal burns quickly, with much greater intensity, in a small chamber. Yet the Anthratube, in tests, has repeatedly demonstrated that, because the intense fire liberates a very high percentage of the Btu's in the fuel, it requires substantially less fuel to do a comparable job. The Anthratube, original model, burned 50 to 60 lb of fuel per sq ft per hour; furnaces burned 10 lb. The same Anthratube liberated 500,000 Btu per cu ft; the furnace, 50,000. Per sq ft of heating surface the original Anthratube absorbed 50,000 Btu; the furnace, 6,000.

In transition from the original laboratory model to commercial production this new heating unit has lost surprisingly few of its desirable characteristics. At present two manufacturers are producing the new unit. Axeman-Anderson Co., of Williamsport, Pa., offers the AA *Anthratube*, a completely automatic unit 24 in. wide, 31 in. deep, and 42 in. high, which burns pea coal fed directly from the bin to the special combustion chamber by a worm. The AA *Anthratube* furnishes sufficient heat for a 6- to 8-room house as well as domestic hot water; a thermostatic control regulates house temperature, fuel supply, and ash removal. Capacity is 400 ft of steam, 600 of hot water; rated output, 130,000 Btu.

The D. L. & W. Coal Co. (120 Broadway, New York, N. Y.) has a model, 27 in. wide and 47 in. high, which is fed from an automatic hopper and burns chestnut coal. Hopper capacity is 250 lb, enough for three severe winter days for the same sized house. Fuel flow is by gravity; an ejector automatically puts ashes into a container. This unit, also automatically electrically controlled, will bank itself for up to 15 days when there is no call for heat.



Products

Message from a Subscriber

A correspondent of ours on the West Coast tells us he literally had to search all over the U.S.A. to find a lavatory for building-in which was also equipped with a pop-up drain fitting. We helped him hunt, so we learned, first-hand, that you can get pop-up drains in pedestal and other models, but by some coincidence all the major manufacturers have discontinued that type of equipment for built-in lavatories. No quitter, our correspondent eventually obtained exactly what he wanted from Mansfield Sanitary Pottery, Inc., Perrysville, Ohio. Whereupon a number of architects in his vicinity, who had given up the hunt, were tremendously cheered; now they could detail dressing table-lavatory counters without fear, and without having to fit this new conception of equipment with the antique plug and chain.

Plastic Tile

One of the least expensive of the plastics from which wall tile can be made is polystyrene; however, it has three drawbacks: it is easily scratched or marred; it is readily attacked by solvents, including common cleaners; and since it holds an electrostatic charge well, it attracts dust strongly. Now, after difficult research, a surface coating has been developed to combat these difficulties. Called *Logoquant*, it was developed by Bjorksten Research Laboratories, 185 N. Wabash Ave., Chicago 1, Ill. Styrene tiles treated with *Logoquant* show resistance to abrasion or marring increased by 18% (test by ASTM method); reduced dust pick-up due to an increased gloss (surface transparency increased 14%); and no attack by solvents—at least, by common solvents. The method of applying *Logoquant*, while not complex, is such that it ought to be applied by the tile manufacturer; since the treatment has just been announced, we know of no manufacturers who are yet in production.

New Insulating Material in Fireproof Door

On the next page you'll find photographs of demonstrations, just completed, of a new fireproof door. The door itself, called the *Weldwood Door*, is flush-surfaced, with plywood faces, and is manufactured by U. S. Plywood Corp., 55 W. 44th St., New York, N. Y. Most exciting about the product is the new *Kaylo* insulation which forms the core.

This product is made principally of lime, silica, and asbestos formed into a solid which is composed of myriad submicroscopic air cells. *Kaylo* is manufactured by an Owens-Illinois subsidiary, American Structural Products Co., South River, N. J., who expect to be in quantity production in the next few months. *Kaylo* will be available in two densities, 20 lb per cu ft (more than 80% air cells), and 11 lb (more than 90% air cells). As used in the door, it has been thoroughly tested by the Underwriters Labs, and the door has been approved for Class B and C openings (1-hour fire rating). The 20-lb *Kaylo* itself is to be available in fireproof tile for roof decking (under a weather surfacing) and other structural uses, as well as door construction. The light density (11 lb) will serve as heat insulation in block form, and eventually for pipe covering, for locations where it must withstand, in long service, temperatures ranging from freezing water to red-hot steel (1000F). Although *Kaylo* undoubtedly has value as low-temperature insulation, sale for this purpose is not contemplated now, and little research has been done in this direction. *Kaylo* can be drilled, sawed, and nailed with woodworking tools. The largest size to be manufactured will be 18" x 36", 3" thick.

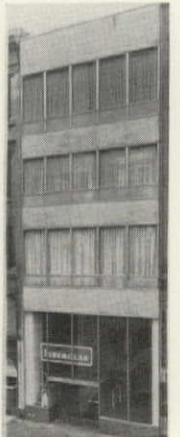
1



2

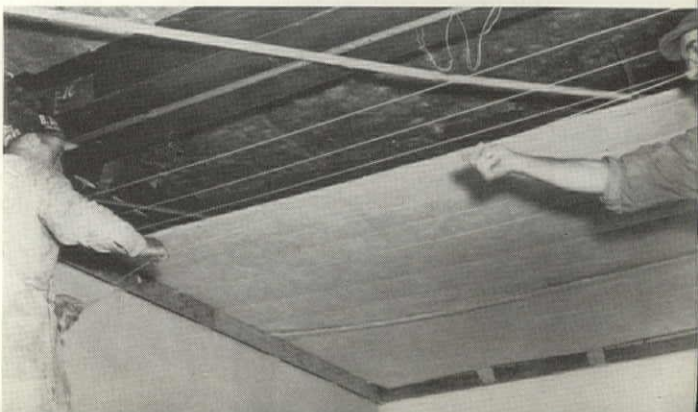


3, 4



Fiberglas has just opened a new building in New York, for which the architects were Skidmore, Owings & Merrill. Photos show: 1, open office area, with Fiberglas acoustical board incorporated in a Miller troffer-lighting-hung-ceiling system; walls are sound-absorbent Fiberglas batts covered with brown Fiberglas mat and perforated aluminum. 2. Conference room has Fiberglas acoustic board ceiling faced with patterned Fiberglas mat. Fiberglas and other yarns appear in curtains, upholstery, folding doors. 3. Another conference room, walls paneled with wood-mounted Fiberglas fabric and acoustic batts. 4. Exterior. 5. Installing ceiling of acoustic blanket laid on cord, surfaced with stretched fabric—all materials, even the cord, Fiberglas!

5





Products



6, 7



Demonstration of Weldwood door with Kaylo insulation core: 6, five minutes after the oil-soaked kindling was lit; 7, 14 min, 13 sec after; in another five min the conventional six-panel wood door was completely destroyed, while Kaylo-cored door continued to function properly. 8. The new door can be fitted and hung with ordinary tools. Kaylo, made of lime, silica, and asbestos, is a new Owens-Illinois insulation; the door is a U. S. Plywood product. Door is 1-3/4" thick, comes in several standard sizes, may have any of a number of hardwood surfaces. The insulation can also be used structurally; Kaylo's extreme lightness may help reduce quantity of steel in buildings. The insulation's crushing strength is from 150 to 450 lb psi depending on density (see preceding page for fuller description).

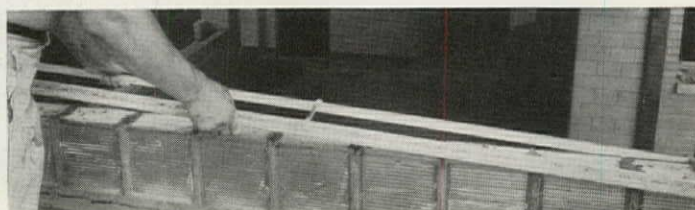


8

William Bortolotti & Sons of Detroit, masonry contractors specializing in glass block, have developed special installation devices. Photo 9 shows metal jig used to hold each block while vertical-joint mortar is applied; 10 and 11 show horizontal joint fixture made of 1" x 1" angles between which mortar is spread. Besides keeping mortar off block faces, these fixtures permit use of dry mortar mix, making it easy to fill each joint completely without causing the block to sag or "float."



9



10, 11

AIR AND TEMPERATURE CONTROL

B & G Airtrol System: boiler and tank unit which eliminates air accumulation in hot water radiator system. Boiler tube extends supply main into boiler water, preventing air from rising into piping and heating units. Tank fitting provides separate air passages to top of tank; displaced water flows back into pipe connections to system. Bell & Gossett Co., 8200 N. Austin Ave., Norton Grove, Ill.

Metalbestos: lightweight gas vent and flue pipe. Pipe-within-a-pipe construction. Aluminum inner pipe heats rapidly; cold air entering air space at bottom of run is heated where flue gases are at highest temperature. As hot air rises it carries heat to top of run. These two factors assure a hot stack throughout its entire length. Outside pipe of galvanized steel is weather-resistant in any climate. Produced in 3', 5', and 10' lengths, in both round and oval shapes. Williams-Wallace Co., 160 Hooper, San Francisco, Calif.

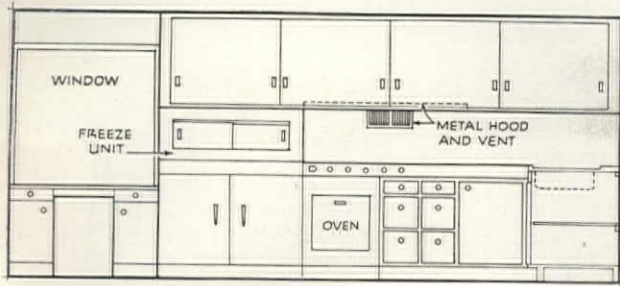
Trion Electric Air Filter: an attachment for a warm air furnace, which removes dust, dirt, and tobacco smoke from the air by electrostatic precipitation. Trion, Inc., McKees Rocks, Pa.

DOORS AND WINDOWS

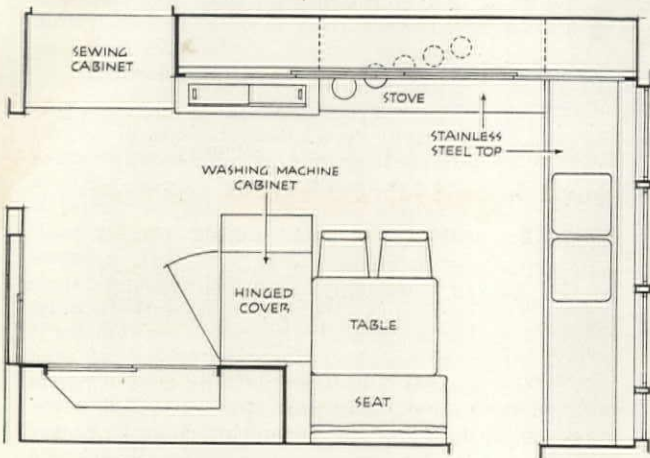
Calder Door: overhead type garage door. Four door sections built of wood and aluminum with covering sheet of thick aluminum alloy. Galvanized steel cable runs on Neoprene tired ball-bearing rollers in the tracks; smooth, quiet operation. Calder Mfg. Co., 628 N. Prince St., Lancaster, Pa.

Integralock: door lock for the average home. Precision manufacture; cylinder in knob. Quarter-turn of key releases both latch and dead bolt, opens door. Self-lubricating. Available in choice of several finishes to harmonize with decor of small home construction. Sargent & Co., New Haven 9, Conn.

Prefabricated Awning Window: for no-draft ventilation. Movable sash opens by means of inconspicuous handle; smooth-working worm and gear mechanism. Interchangeable screen and storm sash installed indoors. Fixed and movable sash may be combined. Unit complete with hardware, glass, and screen. Weather stripping included on jamb sections; available for horizontal joints. Gate City Sash & Door Co., Fort Lauderdale, Fla.



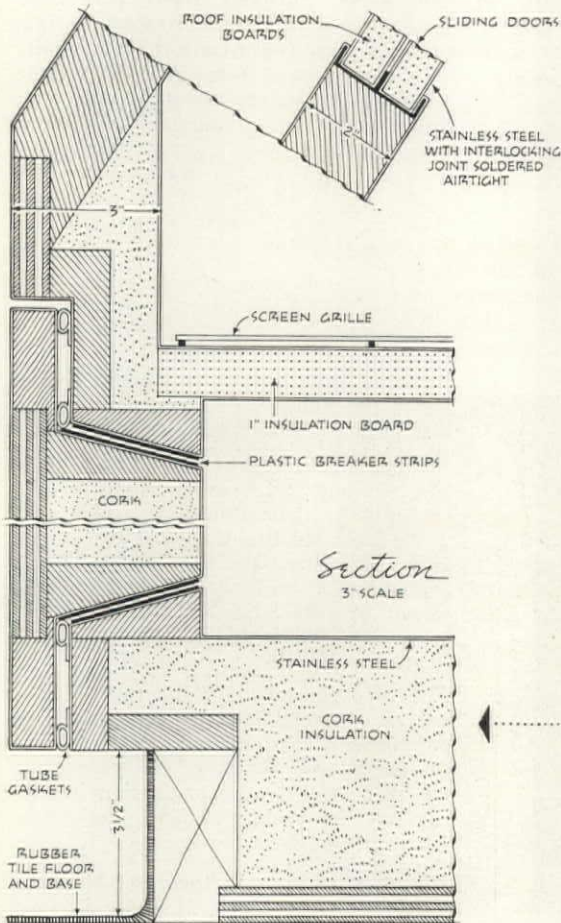
Elevation 3/16" SCALE



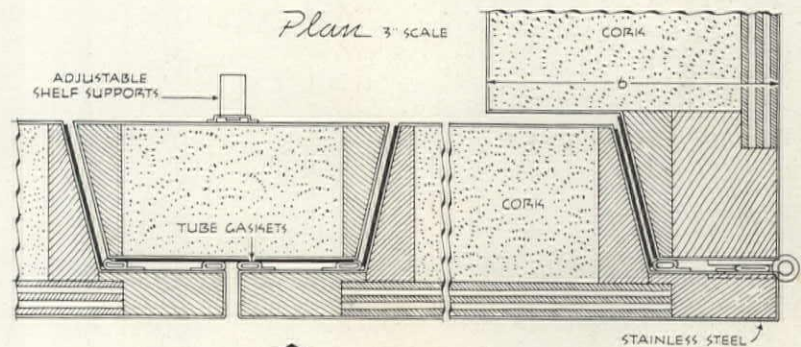
Plan 3/16" SCALE



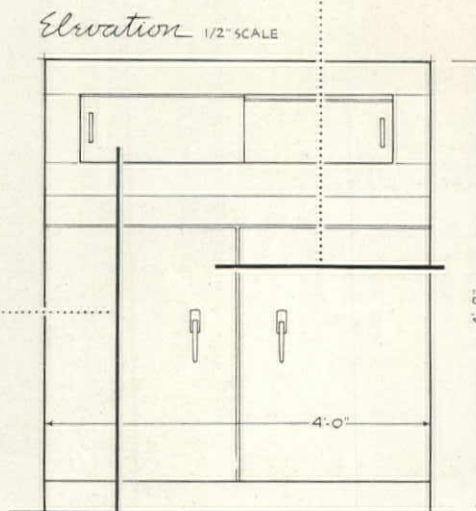
Gilbert Ask



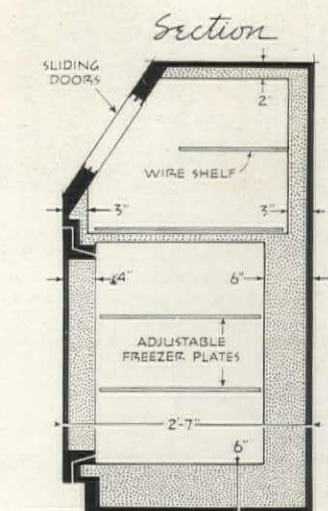
Section 3" SCALE



Plan 3" SCALE



Elevation 1/2" SCALE



Section

HOUSE

Liverpool, New York

SARGENT-WEBSTER-CRENSHAW & FOLLEY
Architects

FROM THE TECHNICAL PRESS

By JOHN RANNELLS

FROM OTHER PUBLICATIONS

Airports in the Balance Sheet of Real Estate Values. Address by George W. Burgess, Deputy Administrator of Civil Aeronautics, before the National Assn.

of Real Estate Boards, San Francisco, Calif., Nov. 14, 1947.

Major patterns of land values in this

country during the past century have been based on the predominant systems of transportation: water, railroad, and highway. Now the increasing use of the airplane is bringing about new shifts in land values, differing with the various types of airports and sizes of the related communities. New attitudes and approaches to town planning are demanded from businessmen and from ordinary citizens if the effects on the community are to be kept healthy.

This address gives rather detailed pictures of actual developments in several different-sized cities. Residential areas have generally sprung up near airports whether or not the land was suitable. The big terminal airports are big business in themselves, with their greatest money making potential in non-aviation activities. Medium-sized airports must be integrated with their communities if the healthy commercial growth of each is not to be impaired. The small airports for the most part "just grew" wherever there was a convenient, cheap, flat piece of land (and now are generally in need of being cleaned up).

Our current national airport plan calls for development of 4400 airports during the next three years, half of them small, with runways of less than 3500 feet. Most of the survey work of the concerned communities remains to be done, with the CAA ready to act as consultants and advisers in connection with every aspect of airport or air park planning design, construction, zoning, and management.

This is a wide field, of concern to communities (and architects) throughout the country.

Building Type Reference Guides. Bulletin of the American Institute of Architects, 1741 New York Ave., N. W., Washington 6, D. C. Jan. 1948.

The current issue carries supplements to Building Type Reference Guide No. 2, the Hospital Building, and No. 4, the Hotel Building. These were published originally in the *Bulletins* for May and December, 1947. No. 3, Library Buildings, was published in the July and September issues.

The Department of Education & Research of the A.I.A., by continuing to supplement the original articles comprising these "Guides," is rendering useful service to the profession in filling out the background for architects getting into these fields.

Directory of Manufacturers of Modular Products. Grid Lines, Modular Service Assn., 110 Arlington St., Boston, Mass. Dec. 1947.

This imposing list consists mostly

(Continued on page 92)

QUALITY!

SOLID CORE

FLUSH DOORS & PANELS

FLUSH DOORS are:

TEGO-BONDED

SOLID Hardwood LUMBER CORE THROUGHOUT

1/8" CROSSBANDED

Which guards against shadow lines appearing on face of door after finish is applied.

Fully guaranteed against warping or separation of Veneers.

Oak, Walnut, Mahogany Gum

PANELS are:

TEGO-BONDED

STOCK SIZES—UP to and including 4' x 8'

Face Veneers center book matched



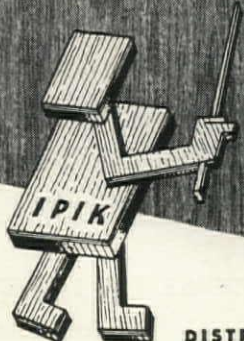
Oak, Walnut, Mahogany, Prima Vera and other fancy-faced cabinet woods.

IPIK

PLYWOOD CO.

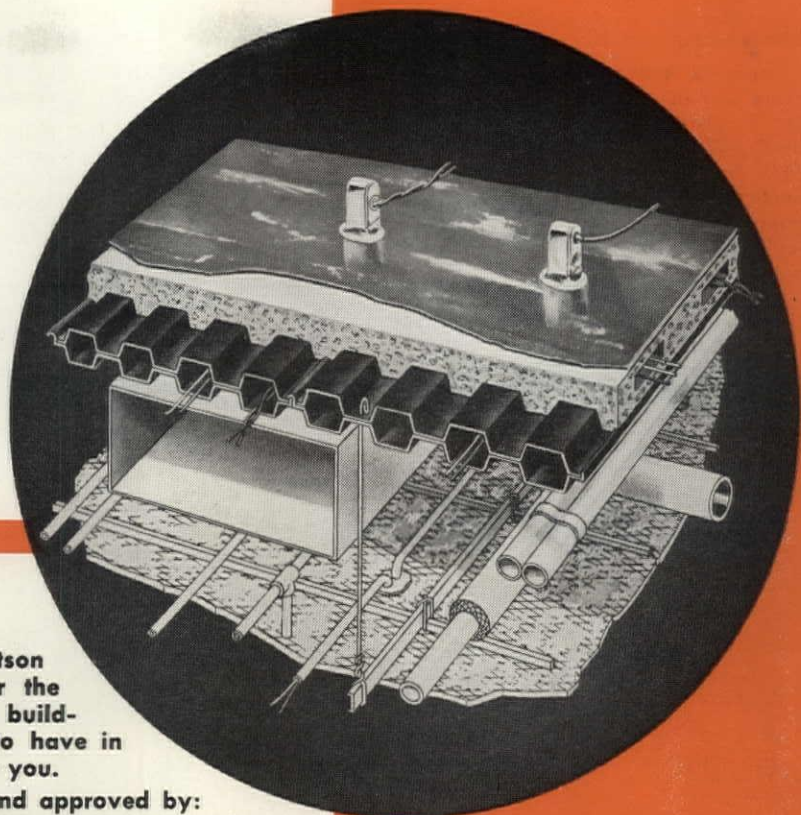
KENNER, LOUISIANA

DISTRIBUTORS IN PRINCIPAL CITIES

DATA

FOR FUTURE REFERENCE



Steel Q-Floors, made by H. H. Robertson Company, have been specified for the largest and most advanced postwar buildings. Here are the main features to have in mind when the subject comes up for you.

1. Four-hour fire rating, tested and approved by: Bureau of Standards; Underwriters' Laboratories, Inc.; Mellon Institute of Industrial Research.
2. Structural properties verified in tests by: Bureau of Standards; Mellon Institute; University of Kentucky.
3. Approved for electrical raceway by: Underwriters' Laboratories, Inc., and covered by Article 356, National Electrical Code.
4. Over 6,000 installations—many millions of square feet and never a construction fire!

Consider Construction Time

Completion time, not starting time, is what your client wants. Steel Q-Floors arrive pre-cut. Two men can lay 32 sq. ft. in 30 seconds. Construction is dry, so the Q-Floor immediately becomes a working platform for other trades.

So when estimating time of steel delivery be sure to figure on time lapse for demolition and excavation and then realize that Q-Floors reduce over-all construction time 20 to 30%.

Consider the Electrical Feature

The steel cells of Q-Floor are crossed by raceways for carrying wires of every electrical service. An electrician drills a small hole and can install an outlet in a matter of minutes. This means that all outlets and partitions can be established after occupancy. The headaches this eliminates only an architect fully appreciates. All floor plans are flexible forever, which keeps buildings young and greatly increases the earning power of rental space.

See Q-Floor Fittings at any General Electric construction materials distributor's. For details, please write.



H. H. ROBERTSON CO.

2405 Farmers Bank Building
Pittsburgh 22, Pennsylvania



Offices in 50 Principal Cities
World-Wide Building Service

(Continued from page 90)

of concrete masonry manufacturers (about 500 of them) in nearly every state in the Union, also Hawaii and Canada. Structural clay products are well represented, also the glass block industry (all both of 'em, as they say in Pennsylvania). Most significant is a broad listing of wood and steel window manufacturers (more than 20 each).

The Functional Basis of Hospital Planning—Electrical Section. *Division of Hospital Facilities, U. S. Public Health*

Service. The Modern Hospital, 101 Park Ave., New York 17, N. Y. Nov. 1947.

A full discussion of the requirements peculiar to hospital work: wiring, lighting, switches, call systems, telephones, inter-communication, fire alarm, clocks, etc.

Illuminating Engineering. *Illuminating Engineering Society, 51 Madison Ave., New York 10, N. Y. Dec. 1947.*

This issue contains brief reports on all

the technical committees of the Illuminating Engineering Society, from "Aviation Lighting" to "Testing Procedure" (contained in the annual report of the general secretary). The "1947 Progress Report" describes and illustrates the outstanding developments during the year in equipment, standards, etc. Most interesting, architecturally, is an overall hexagonal ceiling louver with an opening large enough to reach through for relamping. Hinged sections on four-foot centers, large enough to allow the head to go through, permit inspection of any fixture. An authoritative report on school lighting is "in the works" and should soon be published.

Lighting the Hospital Patient's Room. *Willard Allphin, C. B. Stiles, Albert Zack. Illuminating Engineering. Dec. 1947.*

Several different needs must each be fulfilled for adequate lighting of private and semi-private hospital rooms: general lighting, reading in bed, physical examination, night light, post-operative lighting, shaving, reading in chair, etc. Experiments at two Massachusetts hospitals utilizing various fixtures are reported in detail.

One of the most effective fixtures described is a pin-up fluorescent with two vertical bulbs separated by a baffle. Lighting the bulb farther from the patient gives excellent general illumination; lighting the nearer bulb gives light for reading.

The Place of Acoustics in the Future of Music. *Harold Burris-Meyer. Journal of the Acoustical Society of America, 919 N. Michigan Ave., Chicago, Ill. July 1947.*

This brief paper outlines the interdependence of science and art in one field of culture and "proposes a conceptual framework within which their integrated development may progress."

For they must progress together, now that the increasing importance of music in our lives has been so largely made possible by developments in recording and reproduction. And reproduction must aim higher than mere commercial standards (which have too often produced sounds that do no more than remind the listener of music) or else the art will also fall back.

This paper points the way ahead in this field as only a clear thinker can do. The problems to be faced here are mainly those of understanding, of defining areas for research and discussion which have been hitherto left hazy—development of a common terminology for all those concerned with music, development of criteria for measurement of music and its effects upon people, establishment of a facility for the exchange of information on research or developmental activities where no effective liaison exists at present.

The artist and the scientist can get together in all fields in some such way as

(Continued on page 94)

A Schlage Installation because...



Schlage is convenient

When they planned their home, the Montgomerys didn't know one kind of lock was more convenient than another. But their Architect did. The Schlage locks he specified have provided them with finger tip locking convenience, and automatic unlocking when leaving a room.

See Schlage
in Sweets Architectural
File

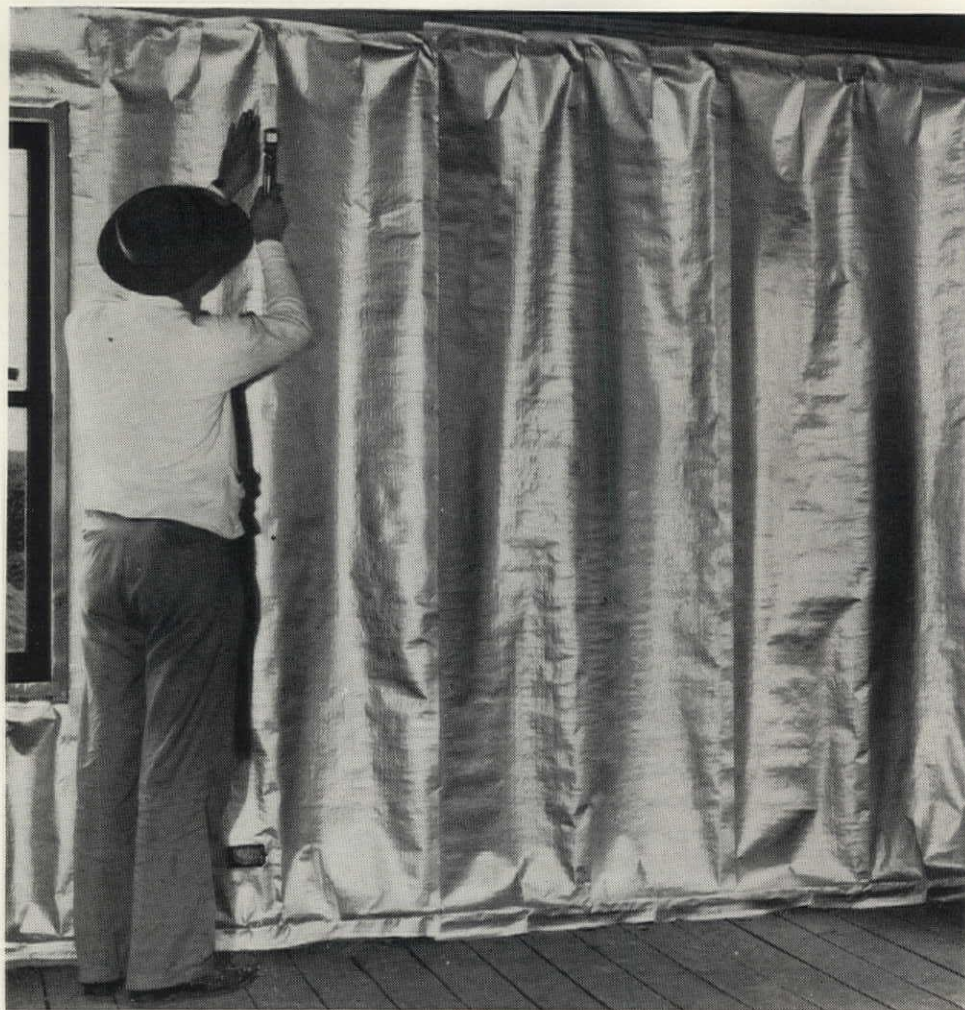


SCHLAGE
LOCK COMPANY
SAN FRANCISCO NEW YORK

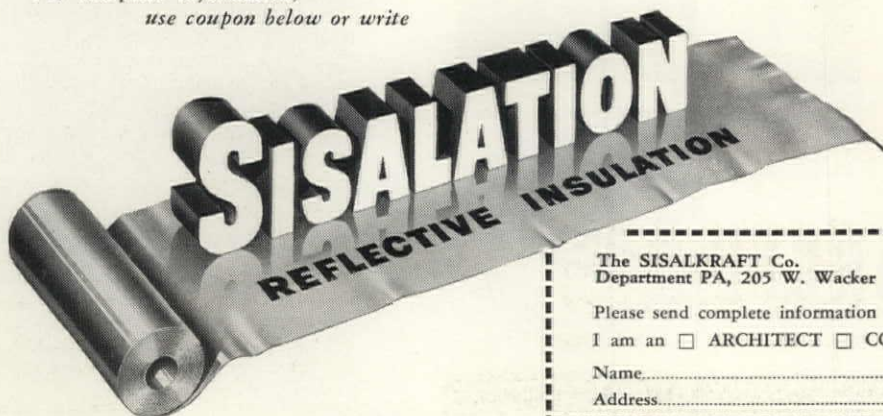
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(Continued from page 92)

outlined here. As the culture of the world progresses, they must.

Trends in Solid Fuel Research. *Harold S. Rose. Mechanical Engineering, 29 W. 39th St., New York, N. Y. Oct. 1947.*

This report, an address delivered at a meeting of the American Society of Mechanical Engineers at Chicago last June, gives the low-down on our coal and oil resources. The author is vice

president and director of research of the Bituminous Coal Research Institute.

Those in the know have been aware of it for decades but the general public is just now finding out that our own fuel resources consist almost entirely of coal, so much so that if we don't curtail consumption of oil we will very soon be without it. To quote from the report: "Technical developments have made it possible to produce from coal

almost any types of solid, liquid, or gaseous fuels or synthetic chemical products that are desired. Our coal resources are so enormous that they can supply all the United States requirements for heat, light, power, transportation, the smelting of metals, all liquid and gaseous fuels, and most synthetic chemicals for more than 1,000 years at the present rate of consumption, with allowance for mining losses and conversion efficiencies."

The report goes into the problems of the coal industry in a broad way—mining, underground gasification, transportation, power, etc. It gives a general view of the utilization of this national resource and leaves us wondering how come the largest consumer (steam locomotives) is the least efficient. The most efficient utilization of coal would be at the mine (as much is now paid to the railroads for hauling as to the producers for mining).

The conclusion is inevitable, in this reviewer's opinion, that this greatest of our national power resources must be used as efficiently as possible. A nationwide power network, supplied by steam plants at the mines and by water power wherever that is available, seems to be the answer.

MANUALS, PAMPHLETS

Handbook of Residential Wiring Design. *Industry Committee on Interior Wiring Design, 420 Lexington Ave., New York, N. Y., 1946. 24 pp., 5½" x 8¼". 25 cents*

Very brief and clear, this pamphlet was sponsored by several lighting and manufacturers' associations. It covers requirements of single-family dwellings room by room.

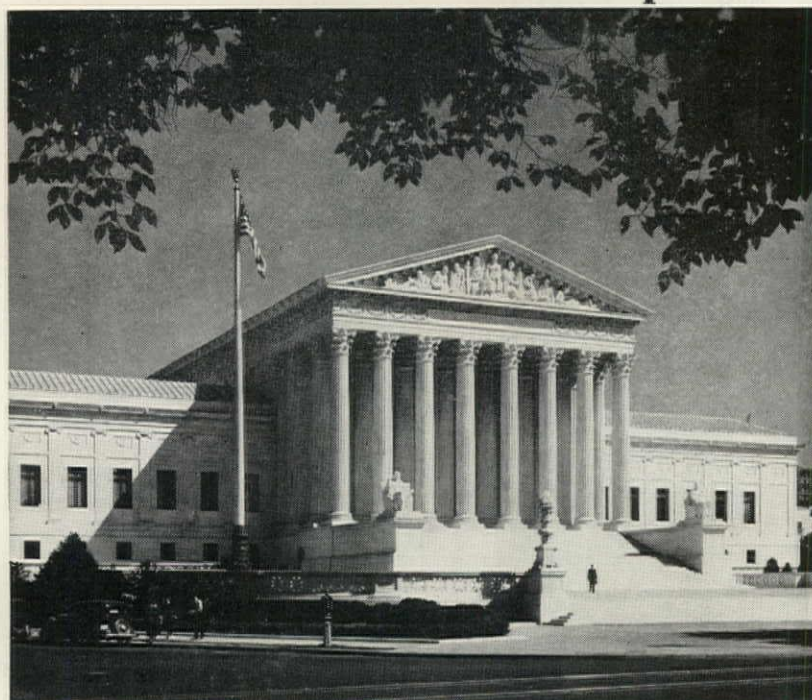
Painting Specifications. *Specifications Committee, Painting & Decorating Contractors of America, 12 S. 12th St., Philadelphia 7, Pa.*

These specifications will undoubtedly fulfill a long-felt need. It is commendable that the specifications represent a collaborative effort of the Specification Committee, the National Bureau of Standards, and the Scientific Section of the National Paint, Varnish & Lacquer Association. The specifications are divided into four parts, namely, general requirements, exterior work, interior work, and refinishing work. In addition, there is a helpful supplement which describes a variety of woods commonly used for exterior work together with their finishes, similarly a listing of woods used for finer finishes.

Streamlining would have given these specifications the "new look" and would have delighted this reviewer and other proponents of abbreviated specifications.

(Continued on page 96)

Vermont Marble Stands Supreme



Supreme Court Building, Washington, D. C. Cass Gilbert, Architect. Imperial Danby Marble

From Washington to San Francisco—from the Supreme Tribunal of the Land to the resting place of one of its citizens, Vermont Marble stands—a Temple of Justice and a Temple of Peace.

Yet marble is so adaptable that the simplest store or office, and the humblest cemetery may also be marked and dignified by this durable marble of crystalline beauty.



Nager Mausoleum, Lawndale, California
B. S. J. Cahill, Architect. Imperial Danby Marble

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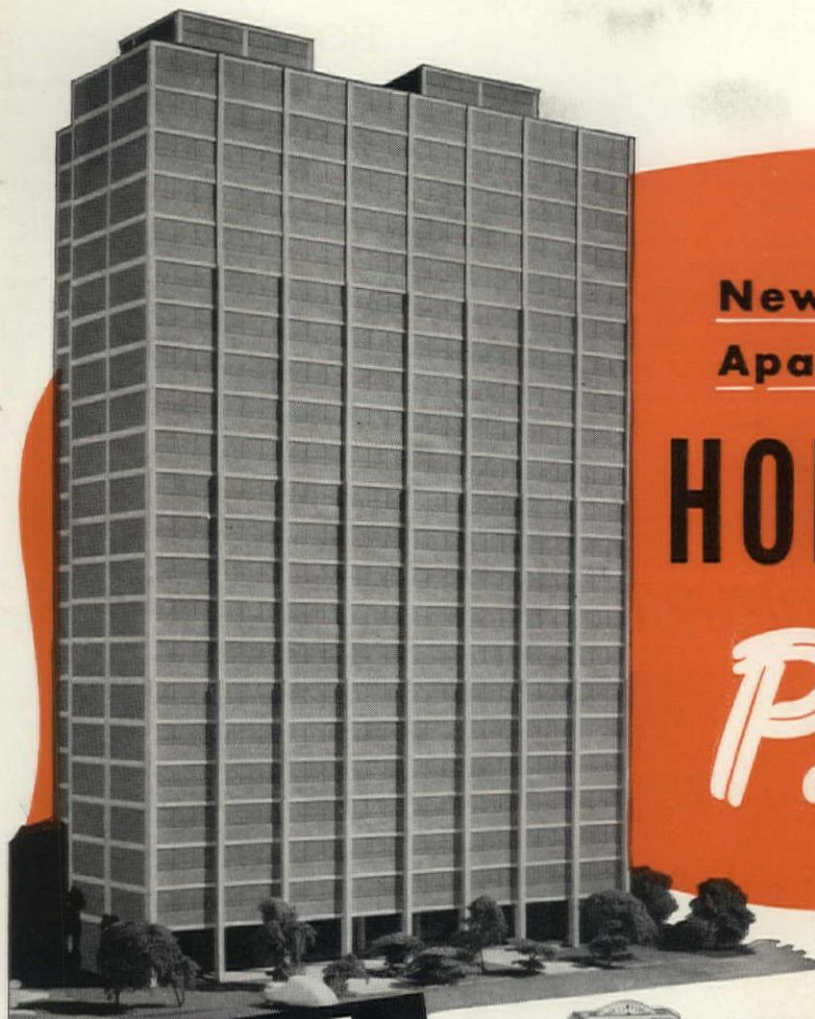
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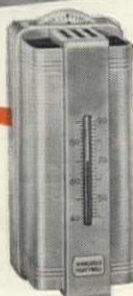
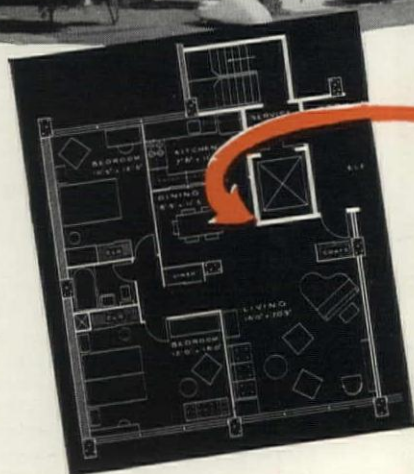




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Apartment will have . . .**

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PROMONTORY APARTMENTS, Chicago

Herbert S. Greenwald; President, Promontory Construction Corporation
Raymond Epstein, Robert H. Friedlaender, Morton B. Weiss; Trustees,
Promontory Apartments Trust
Plonsker Engineering Company; Heating Contractor

UNIQUE in both design and construction, the 21-story Promontory Apartments, now under way on Chicago's South Shore Drive, represent a splendid modern example of reinforced concrete construction.

Specially designed steel frame picture windows used throughout the 122 suites take full advantage of the lake shore view overlooking Promontory Point. Other distinguishing features include sound-insulated double walls and radiant heating with Honeywell Personalized Heating Control. With a thermostat in each apartment, every tenant will select just the individual temperature desired. This means not only the comfort of home heating in every apartment, but important operating economies as well. Tests prove that among present installations P.H.C. systems are saving fuel at an average rate of 20 percent.

And in existing buildings, too, Personalized Heating Control brings these same benefits. Installation is fast, simple—without inconvenience to tenants. Get complete facts about P.H.C. now. Write Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario.

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- Saves fuel—heating costs average 20% less
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- Tenants will pay higher rentals for P.H.C. comfort and convenience.

 **PERSONALIZED HEATING CONTROL**—Honeywell's home-heating comfort contribution for apartment dwellers.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

(Continued from page 94)

The Specification Committee states, "No proprietary brands of materials have been stipulated in the preparation of these specifications. Our supreme purpose has been to prescribe procedure that will best serve the architect, satisfy the owner, and uphold the established traditions of the industry." This is unquestionably an excellent objective but may be difficult to achieve. Without the aid of some unbiased guide which names brands in a variety of

price categories (if price be the accepted yardstick) procedure alone may fall short of ultimate performance.

Illustrations in point are the much repeated phrases, "apply a coat of best-grade manufactured brand of clear Waterproofing liquid," or "apply a coat of a best-grade manufactured brand of resin oil emulsion paint of the desired color," etc., etc.

BEN JOHN SMALL

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BOOKS

THE HOUSE FOR YOU— TO RENT, BUY, OR BUILD

Catharine & Harold Sleeper. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y., 1948. 295 pp., illus. \$5.00

The last two years have seen a remarkable output of books on houses. There have been books of house plans and designs, books of advice about houses, and books of provocative ideas. So much has been published on the subject that one might well question whether there could be any justification for another such book. *The House for You*, by Catharine and Harold Sleeper, is the answer to any doubts.

The Sleepers have found the unfilled gap in this literature and plugged it. It was a gap which really needed to be filled. All of the publications which this reviewer has seen or heard of have been limited in scope in one way or another. None has taken the home seeker step by step from the gleam in his eye through all, and I mean *all*, the stages to the acquisition of a home.

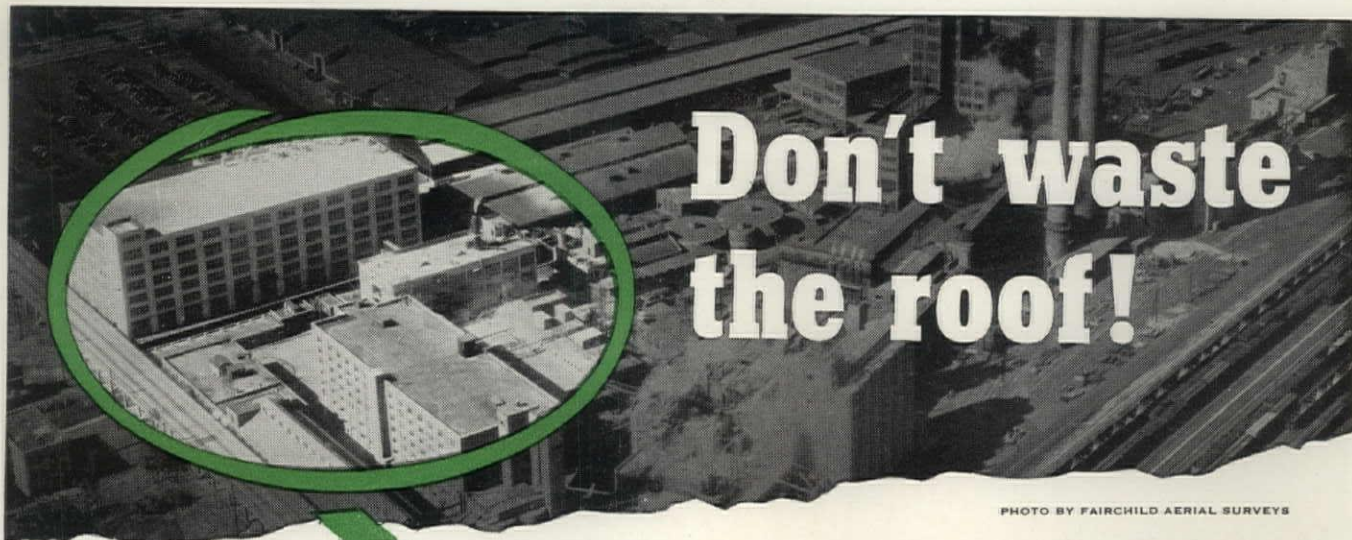
The House for You does this in a most common-sense and realistic manner. It is not limited to those who wish to build, but guides those who must rent or buy as well. This is an ambitious undertaking, but the Sleepers bring to it extraordinary knowledge, skill, and understanding. The subject which could be deadly dull, because of its many prosaic features, is dealt with lightly and with many a humorous touch. The humor serves to point up the seriousness of much of the argument.

The coverage is so thorough and detailed that architects might be tempted to suspect an effort to put them out of business. Second thought would undoubtedly lead them to insist that the book be required reading for all their clients. This thoroughness is such that the book will certainly be invaluable to all offices engaged in domestic practice. It can serve as a remarkable refresher and check list. There are many useful ideas, particularly in the scores of basic plans and the hints for "Keeping the Gremlin Out" and "Making the House Tick."

As of the present moment there is a discouraging note in the chapter on finances where a table indicates that a \$10,000 a year salary justifies a maximum expenditure on house and lot of \$15,000!

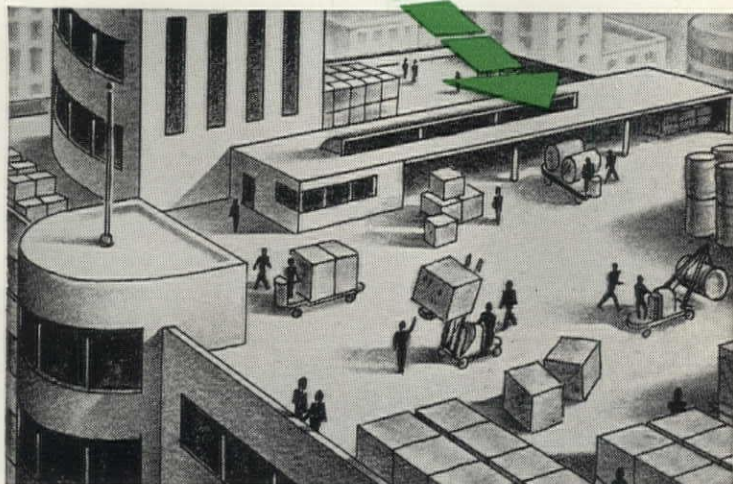
It might be argued that the discussion of design does not adequately present the modernist point of view. Numerically, the historic examples far outnumber the contemporary examples. On the other hand, the argument for a fresh and individual solution of each problem is clearly stated and the purpose of the book is to be a practical

(Continued on page 98)



Don't waste the roof!

PHOTO BY FAIRCHILD AERIAL SURVEYS



AVAILABLE NOW! NEW WAYS TO MORE EFFICIENT ROOFS!

Here's extra shipping, packing and storage space...one sample of the more productive use of roof areas made possible now by new Ruberoid specifications!

ROOFS LIKE THIS are typical of the modern, functional utilization of an area that formerly went to waste. The factory roof illustrated here has a husky concrete surface for heavy traffic and storage. Other related possibilities are hospitals with outdoor decks for convalescents, apartment houses with garden roofs, department stores with recreational roofs for employees.

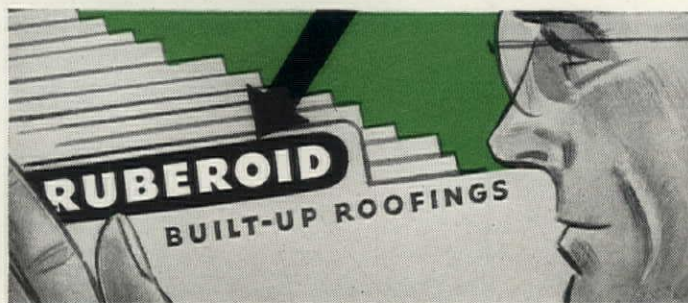
These are "roofs of the future," but recently evolved Ruberoid specifications make them completely possible *today*! As worked out by Ruberoid engineers, these new roofs are not impractical dreams, but thoroughly tested, down-to-earth cer-

tainties! Full details of these and other developments are available from the Ruberoid Company or from your local Ruberoid Approved Roofer. Call on your Ruberoid Roofer for help in the solution of any roof problem. His "know-how" is backed by Ruberoid's years of experience and complete line of all types of roofing materials!

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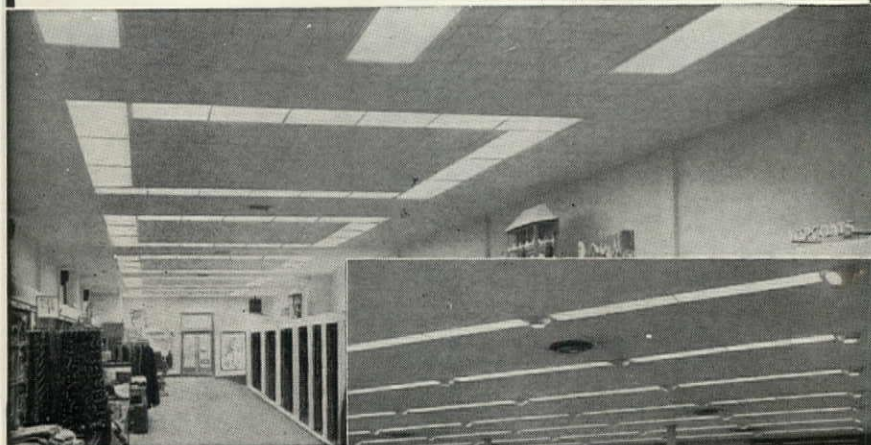
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Asphalt and Asbestos Building Materials

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Remember that Ruberoid makes every type of built-up roof—Smooth Surfaced Asbestos, Coal Tar Pitch with gravel or slag surfacing, or smooth or gravel-and-slag surfaced Asphalt—in specifications to meet any need. Hence a Ruberoid Approved Roofer is not prejudiced in favor of any one type. His services assure you of one source for all materials, centralized responsibility, smoother operation, uniform quality!

PLANNED LIGHTING WITH WILEY RECESSED TROFFERS

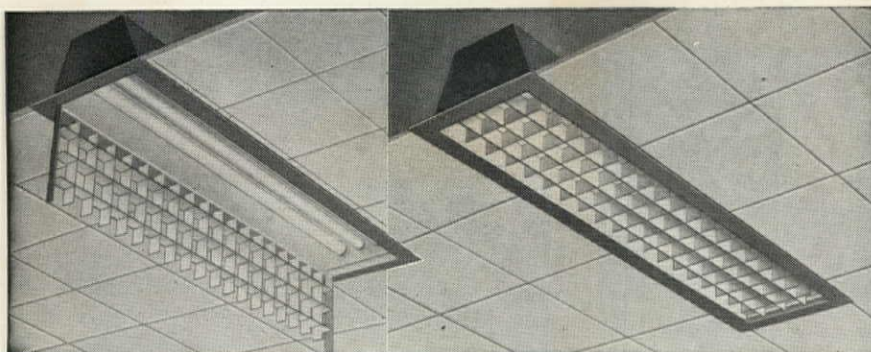


Wiley Recessed Troffers
in unusual patterns

Wiley stock model Recessed Troffers provide custom-made results both in lighting requirements and flexibility of arrangement to fit any architectural plan without custom-made costs.



Wiley Recessed Troffers Combined with "Spots"
in continuous runs.



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One-man service . . . No Tools.
Raise one side, slide sideways
and drop open. Unhook to com-
pletely remove.

FEATURES, UNIVERSAL UNIT:

- Adaptable to any position.
- Individual or continuous runs or patterns.
 - Open, louvered or glass.
- May be combined with Wiley Spots.
- 2, 3 or 4 lamps—Starter or Instant Start.
- Underwriters Approved.

Other WILEY Fixtures:

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NIAGARA BEAM: 2, 3, or 4 lamps, louvered or glass. Flush to ceiling — Singly or continuous runs.

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INDUSTRIAL FLUORESCENTS: Complete high quality line, open, louvered or glass bottoms.

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Reviews

(Continued from page 96)

guide rather than an esthetic treatise. If the home seeker absorbs the wisdom and horse sense of this book and collaborates wholeheartedly with a sympathetic architect, a successful modern house should be the result.

FREDERICK J. WOODBRIDGE

THE NATIONAL PAINT DICTIONARY

3rd edition. Jeffrey R. Stewart. Stewart Research Laboratory, P. O. Box 173, Benjamin Franklin Station, Washington, D. C., 1948. 704 pp., 6" x 9", illus. \$7.50

Other than to satisfy an academic interest the architect will find this book of rather limited value. As such, *The National Paint Dictionary* is well presented; terms are set in easy-to-read type with definitions expressed in not too technical language. Illustrations are sparse and generally poor.

Largely, industrial raw materials used in the production of paints and allied products, and trade names of raw materials and certain finished products form the bulk of terms defined. Should terms such as elemi, chitin, and dimethylaminobenzene produce insomnia, you now know where to turn for help.

Perhaps this is not the place to editorialize but we are still hopefully casting about for an unbiased set of recommendations of what paints to use, frankly naming brands, in the various price classifications. When equivalents are offered for specified brands, what authoritative source is there to support our contentions? Won't someone please undertake such a study?

BEN JOHN SMALL

HOSPITAL CARE IN THE UNITED STATES

The Commission on Hospital Care. The Commonwealth Fund, 41 E. 57th St., New York 22, N. Y., 1947. 631 pp., illus., charts, maps, diagrams. \$4.50

Organized as an independent body with financial support from three foundations, the Commission has been studying the American hospital since 1945. This, its full report, is essential background reading for anyone interested in hospital design. The growth of hospital facilities is traced, the various factors affecting size, use, and need for hospitals are studied, present facilities are analyzed, and recommendations are made for integrated planning.

T. H. C.

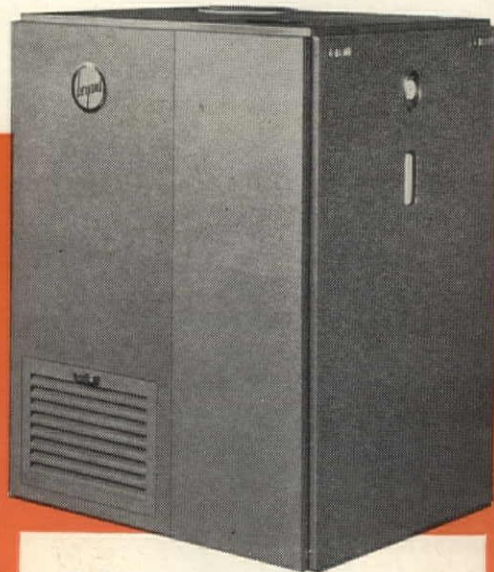
**SIZED TO
FIT**



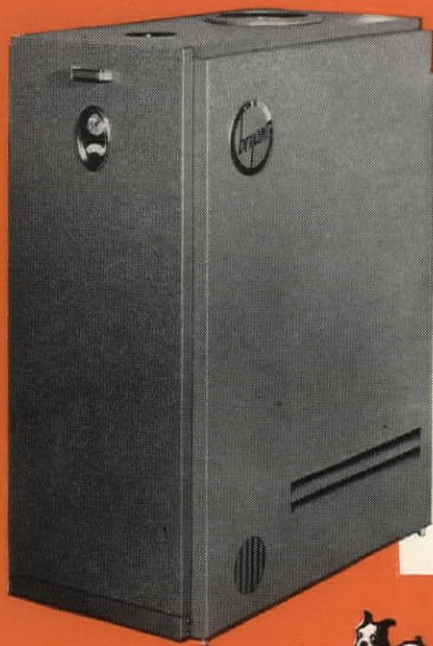
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•Like fitting a gown to a personalized form... you can meet exact requirements on your domestic, commercial or industrial radiation heating job with one of the *thirty-six* automatic gas-fired boilers provided by the Bryant Line. Bryant Boilers are rated from 67,500 to 3,996,000 btu per hour, backed by full automatic operation, long-life, cast-iron sections and high operating efficiency... all proved in thousands of on-the-job successes since 1908. For perfect *fit* in hot water, steam and vapor systems, or for hot water storage applications, choose your gas-fired boilers from Bryant's *thirty-six* sizes... the *perfect 36* for radiation heating.

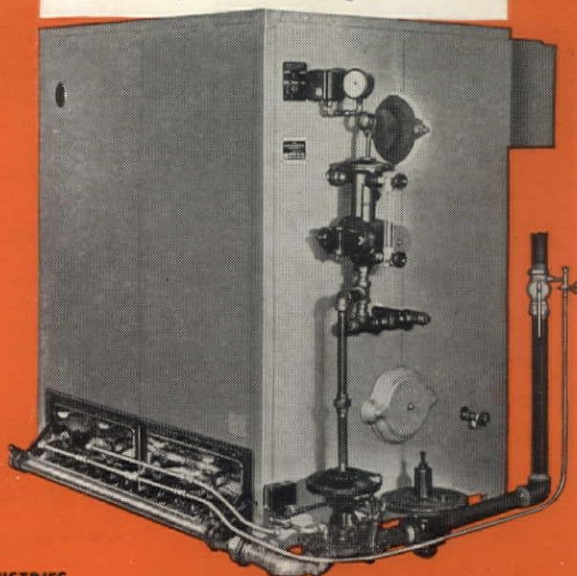


MODEL 455—A.G.A. ratings sq. ft.: Steam 660-2860, Water 1060-4580. Inputs: 198,000 to 858,000 btu per hour. For large homes and other buildings of medium and large size. Water tube design provides maximum brushing action to utilize the most possible heat.



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MODEL 630—A.G.A. ratings sq. ft.: Steam 2960-13,320, Water 4740-21,300. Inputs: 888,000 to 3,996,000 btu per hour. For steam, vapor or hot water systems in large homes, apartments, commercial and industrial buildings. Like all Bryant boilers, operates efficiently on natural, manufactured, LP or mixed gases.



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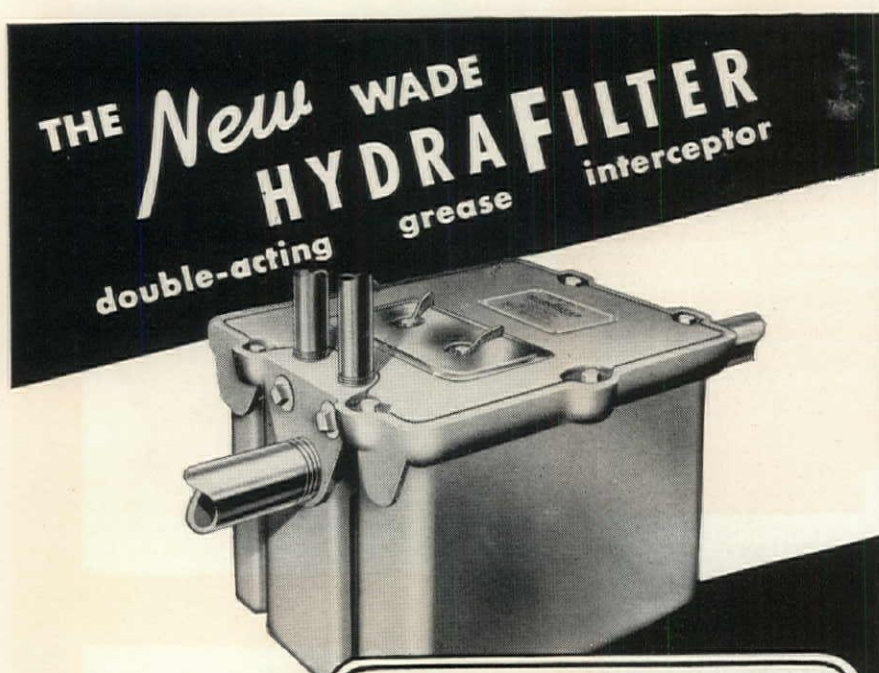
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ARCHITECTURAL DESIGNER — experienced; work on schools, hospitals, churches, and other public buildings. Excellent opportunity. Permanent position for the right man. Information as to education, age, experience, and salary required. Britsch & Munger, 531 Nicholas Bldg., Toledo, Ohio.

SENIOR ARCHITECTURAL DRAFTSMAN—familiar with various phases of architectural work. Work diverse and in-

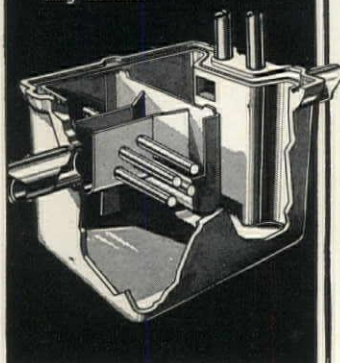
teresting. Long established, medium-sized office. State education and experience. Salary commensurate with ability. Finger & Rustay, 711 National Standard Bldg., Houston, Tex.

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Compare the HydraFilter with any other grease interceptor for efficiency, compactness and low maintenance costs. Full details on request.



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NOTICE: Beginning with the May issue the Jobs and Men department will appear in a new section in the back of the magazine. Insertions for this section will be accepted not later than the 1st of the month preceding publication. Legible copy, accompanied by check or money order for \$5.00, must be addressed to Jobs and Men, c/o PROGRESSIVE ARCHITECTURE, 330 W. 42nd St., New York 18, N. Y. Insertions may not exceed 50 words.

INSTRUCTORS—in architectural design and related courses are needed at the schools of architecture for the spring and fall semesters. Those interested in a career in the teaching profession should apply to Prof. Paul Weigel, Chairman of the Committee on Employment for the Association of Collegiate Schools of Architecture, Kansas State College, Manhattan, Kans.

ARCHITECTURAL DESIGNER—fully experienced on theaters, stores, and industrial work. Must be capable of executing working drawings and details and of directing such effort. Permanent connection can be offered to qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr & Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

STRUCTURAL ENGINEER—with good experience who can design and make drawings for structural and reinforced concrete. Permanent position can be offered to properly qualified applicant in large architectural-engineering organization. Send record of experience and samples of work. Marr & Holman, 701-703 Stahlman Bldg., Nashville, Tenn.

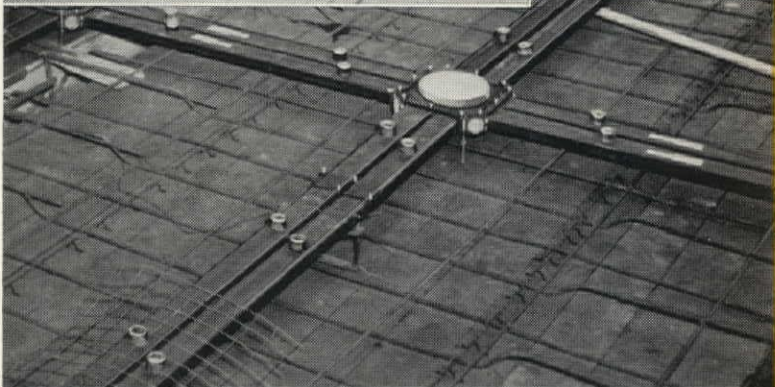
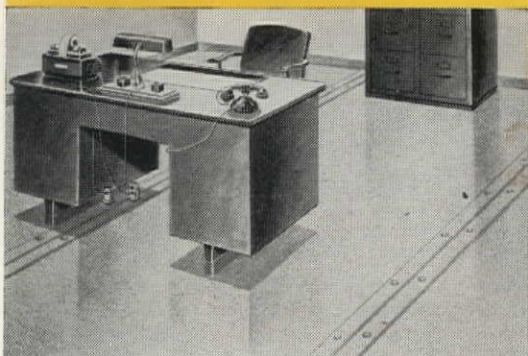
MECHANICAL ENGINEER—fully experienced in making designs, working drawings, and writing specifications for

(Continued on page 102)

Nepcoduct

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**An Electrical Raceway made of STEEL for PERMANENCE—
thoroughly GROUNDED for SAFETY**



Nepcoduct is a steel raceway system complying with the requirements of the National Electrical Code and approved by the Underwriters' Laboratories, Inc. It is a professional material for lighting, power, telephone and signal services.

Pre-determined outlets will provide abundant service for desks and free-standing equipment.

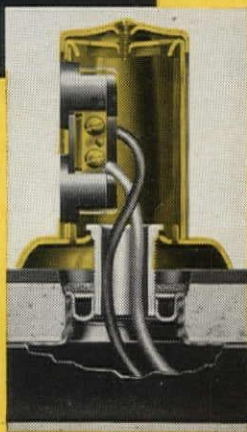
- A new simplified duct of ONE standard size— $1\frac{3}{8}$ " x $2\frac{7}{8}$ "—for both high and low potential runs. A 60% reduction in fittings.

- Eliminates confused specifications—easier to understand . . . easier to order . . . easier to install . . . easier to maintain.

- Outlets may be closed and re-opened without disrupting office routines. No fuss . . . no muss.

- Installed without excess labor or interference in all types of conventional floor construction.

**Nepcoduct The STEEL
Underfloor Distribution SYSTEM**



(Left) Low potential service fitting, and (center) high potential service fitting. Streamlined design—brushed brass finish—strong, simple construction. (Right) Large outlet opening to facilitate wire-pulling; bushed down for actual use. One standard-size duct.

**National Electric Products Corporation
Pittsburgh 30, Pa.**

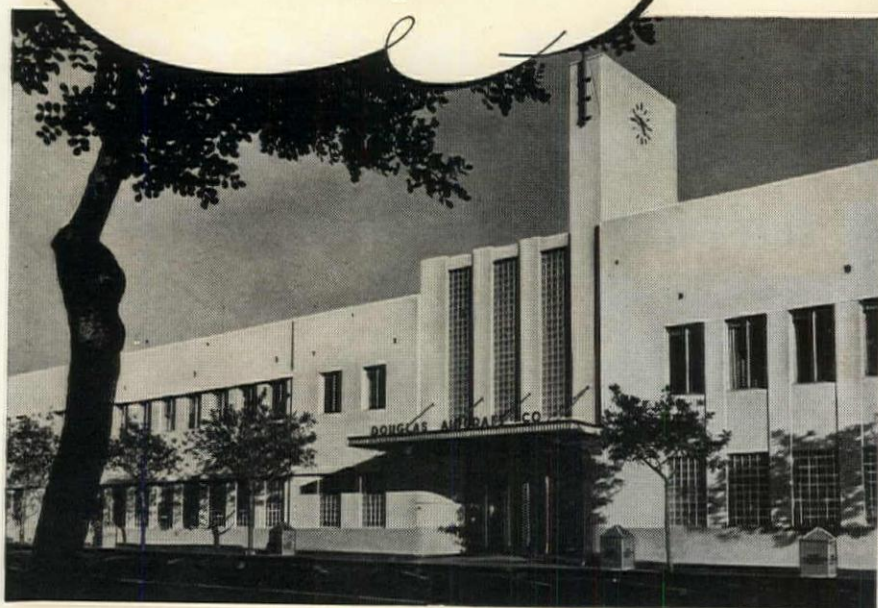
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Jobs and Men

(Continued from page 100)

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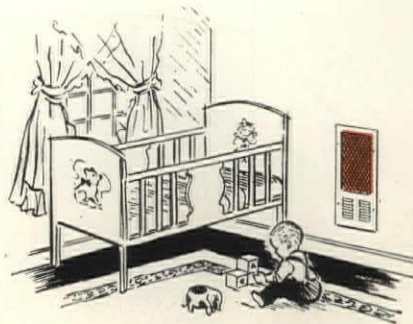
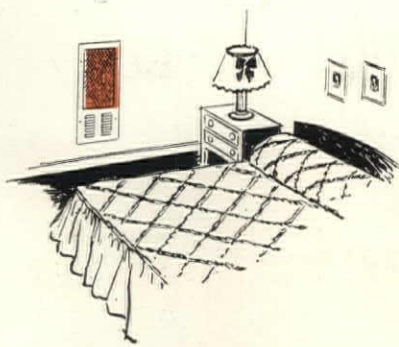
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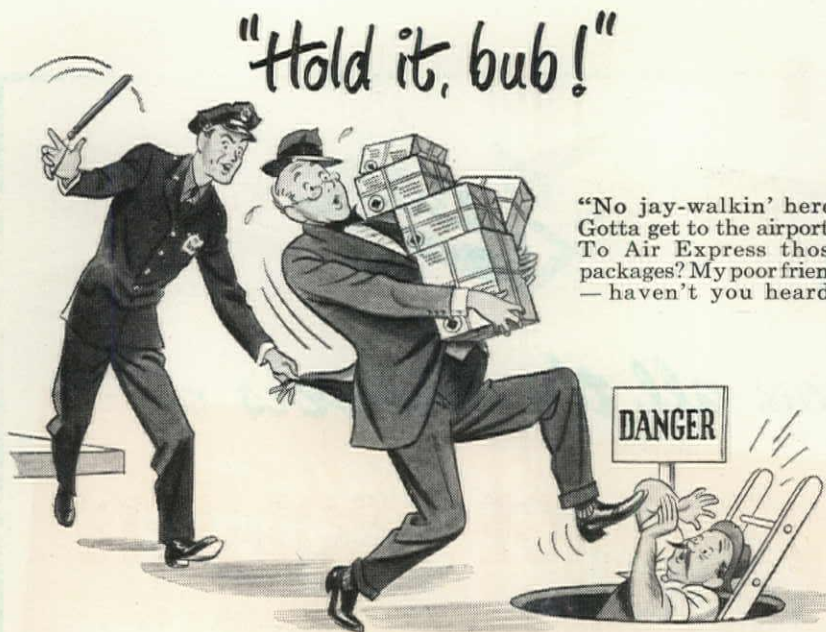
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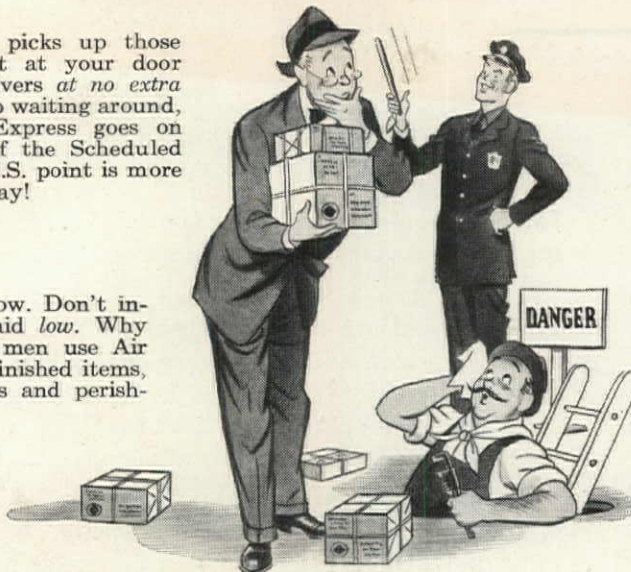
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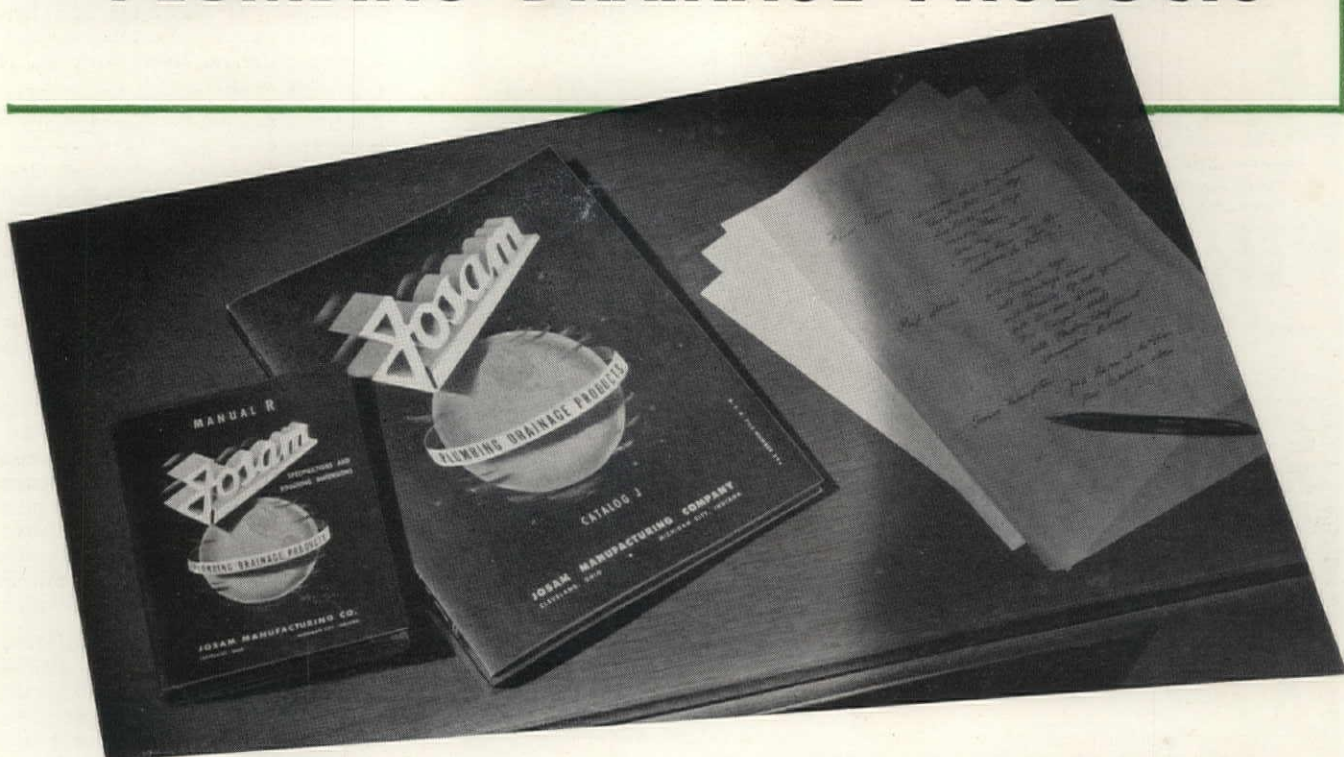
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CITY AND STATE

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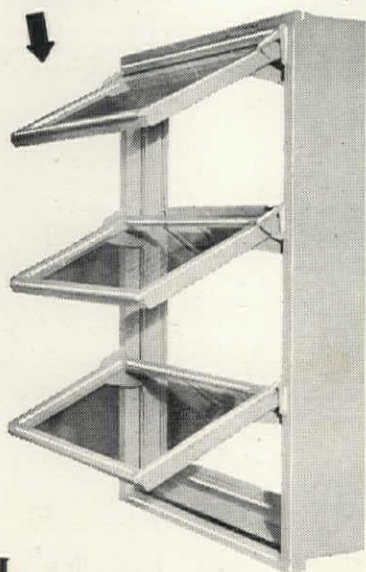
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Jobs and Men

(Continued from page 106)

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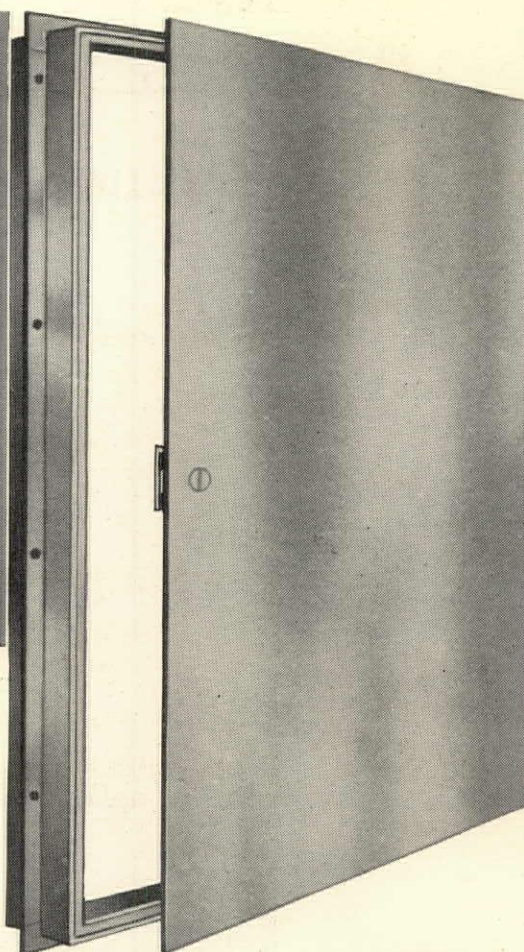
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Published monthly by REINHOLD PUBLISHING CORPORATION, 330 West 42nd Street, New York 18, N. Y., U. S. A. Ralph W. Reinhold, Chairman of the Board; Philip H. Hubbard, President; H. Burton Lowe, Executive Vice President and Treasurer; Gilbert E. Cochran, Vice President and Secretary; Francis M. Turner, William P. Winsor, John G. Belcher, Fred P. Peters, Wallace F. Traendly, Vice Presidents. Executive and editorial offices: 330 West 42nd Street, New York 18, N. Y. Subscriptions payable in advance. Subscription prices to those who, by title, are architects, engineers, specification writers, designers, or draftsmen, and to governments and government departments, trade associations, college and technical libraries, students, publishers, advertisers, and advertisers' executives—\$4.00 for one year, \$6.00 for two years, \$8.00 for three years; to all others—\$10.00 per year in U.S., U.S. Possessions, and Canada. Latin America—\$10.00 for one year, \$16.00 for two years, \$20.00 for three years. All other foreign subscriptions—\$15.00 for one year, \$25.00 for two years, \$30.00 for three years. Single copy—\$1.00. Printed by Lotus Press, Inc., 508 West 26th Street, New York 1, N. Y. Copyright 1948, Reinhold Publishing Corp. Trade Mark Reg. All rights reserved. Registered as second class matter, January 22, 1947, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Volume XXX, No. 9, September 1949. Indexed in Art Index.

September 1949

newsletter

- The Housing Act of 1949, which is now the law of the land, can be summarized very briefly. Title I authorizes HHFA to make loans (for planning, land acquisition, and land preparation) and grants (% of loss involved) to localities, to assist locally initiated, planned, and managed slum-clearance and urban redevelopment undertakings. Only money for construction in this Title is for short-term loans for schools or other public facilities in redevelopment areas.
- Title II extends FHA's small-loan authority and that agency's 608 rental housing activity.
- Title III authorizes PHA low-rent public housing not to exceed 810,000 units over a six-year period. Costs are to be not more than \$1750 a room, which can be raised to \$2500 where really necessary.
- Title IV authorizes HHFA to conduct technical research and studies. Title V allows loans, subsidies, and grants by Secretary of Agriculture to farm owners for needed building improvements. Title VI, among other things, orders a census of housing in 1950 and decennially thereafter.
- Indications are that public housing activity under bill will start sooner than slum clearance, which will require an entirely new set-up at federal and, in many cases, at local level.
- Building Research Advisory Board of National Academy of Sciences has named William H. Scheick, architect (who headed housing research at U. of Illinois) executive director. Industry groups sponsoring Committee's work hope it can be coordinated with research called for under new housing bill. About \$15 million are now being spent annually in industrial research related to construction. Possibilities of coordination have never been better.
- John Knox Shear has been named head of the Department of Architecture at Carnegie Tech. U. of California has not yet named new Dean—President Sproule apparently can't make up his mind, the present faculty having been lukewarm to leading candidate.
- G. E. Kidder Smith has been granted President's Fellowship by Brown U., which allows him \$7500 to study and photograph architecture in Italy and Mediterranean area. Columbia's Perkins Boring Fellowship has been awarded to William Fontaine Jones, who will travel and study architectural developments in South America. Arthur Emerson Burton received A.I.A.'s Langley Fellowship to perform research on atomic age architecture. He will work with AEC at Iowa State College.
- Ken Stowell, until recently editor-in-chief of "Architectural Record," has resigned that position to become vice-president in charge of eastern operations for Giffels & Vallet, Inc., and L. Rosetti, Detroit architects and engineers.

(Continued on page 2)

- Construction in July reached \$1,900 million, a 4% increase over June and a 2% increase over July last year. This is more than a seasonal increase. Most guessers say that prices will not drop much this year. It is still reasonable for architects to advise clients to proceed with work, taking advantage of present dip.
- As NEWSLETTER has pointed out before, business scare in early part of year was largely due to fact that many manufacturers had forgotten how to sell. Lower prices have in most cases resulted in more business.
- Unemployment increases nonetheless, in our field as well as others. Draftsmen can still find work somewhere, but their chance to pick the spots they want to work in has been curtailed.
- Jess Larson, head of the new U. S. agency called General Services Administration (replacing Federal Works Agency) states that \$100 billion in public works is needed over a period of 15 years to compensate for lack of public building during and since war.
- Although government officials have said that public works will be used to ease employment slack, federal steps in this direction are not noticeable. Some states, however, have started work on long-delayed projects. N. Y. State, for instance, is "accelerating" some \$575 million of public work, including many schools and hospitals.
- Textile mills throughout nation have spent over \$700 million in modernization since war's end, but in some areas--New England particularly--the job is only half done. Textile Information Service warns mill owners that mills ignoring plant improvement "are facing losses that would eventually force them out of business." Some architects are reinforcing that argument by studies in their own communities.
- Expenditures for community recreational facilities have increased more than 81% in last two years, American Public Works Association reports. Capital expenditures last year set a record at \$30 million.
- Monsanto Chemical of St. Louis has a preparation called Redwood Rez which prevents discoloration of this highly resistant wood.
- Roc-Wood Floors of Chicago announce that their material--Roc-Wood, made of plastic-bonded hardwood fibers--can be laid with a trowel over almost any surface, works well with radiant heat, costs about 22¢ a foot installed.
- A report to the A.S.H.V.E. by Prof. Algren of Minnesota U. indicates that 16 ft. below the surface ground temperatures lag three months behind air temperatures. In tests at Edina, Minn., it was found that at that depth coldest temperatures were in April, warmest in November. Although frost line was 3 ft. for bare ground and only 1 ft. for sod-covered earth, Prof. Algren feels it is necessary to go to a depth of 14 ft. in that area to find a continuous heat source of 45 degrees, for an earth-source heat pump.
- In fact, reports to the last A.S.H.V.E. meeting were discouraging about use of earth as heat-pump source. Three utility men who have done research on the problem found that so much pipe would be required to draw the Btu. needed from earth for a small house that "it is doubted that ground coils will be an economic heat source for general use." They recommend turning attention to other sources, especially air.

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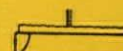
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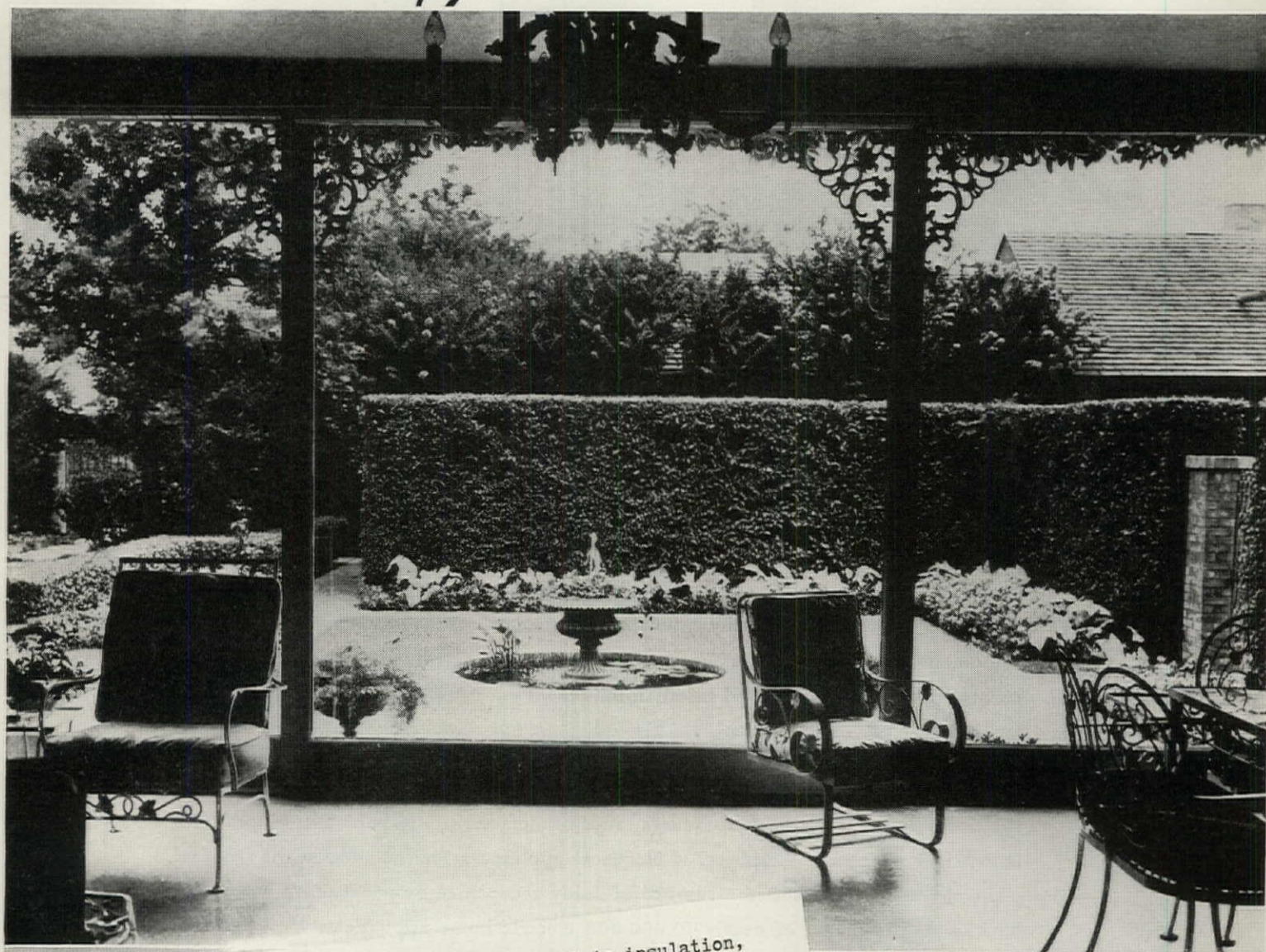
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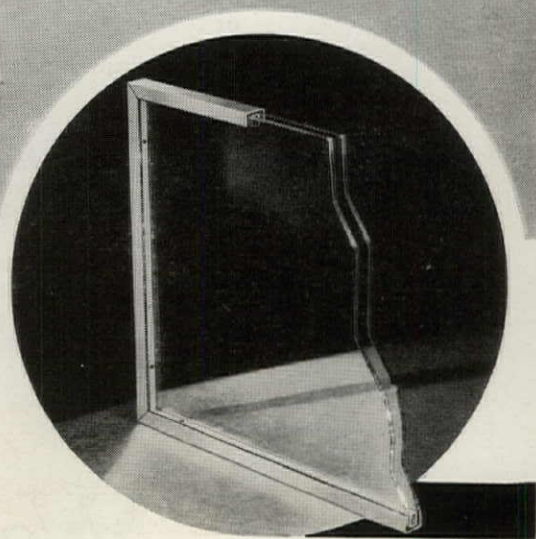
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Attractive *Glass* applications in



TWINDOW, the new Pittsburgh window with built-in insulation, is made up of 2 or more panes of Pittsburgh Glass with a sealed-in air space between. Twindow cuts heat losses through windows. It minimizes downdrafts near windows. And it virtually eliminates fogging and frosting of windows. Architect: Wilson McClure, Dallas, Texas.

PITTSBURGH has recently perfected a remarkable instrument, which, when placed on the surface of one of the panes in a Twindow unit, measures to within thousandths of an inch, not only the thickness of that light of glass, but of the other pane of glass, and of the air space between the two as well. By using this instrument, the performance of Twindow units under all kinds of conditions, including heavy wind pressure, can be accurately determined, and product quality and performance better controlled. This is another example of Pittsburgh research, and the infinite pains taken to assure you of products which will not only look well but also perform well under field conditions.



modern residences



PITTSBURGH MIRRORS help make small rooms look larger, dull rooms look brighter, plain rooms look luxurious. Pittsburgh Mirrors offer a choice of various colors of Plate Glass and are available with silver, gold or gunmetal backing. Architect: Henry W. Johanson, Roslyn, New York.

COLORFUL CARRARA STRUCTURAL GLASS is perfect for walls and wainscots of bathrooms, as pictured here. Carrara is mechanically ground and polished. It assures joints that are true and even—without lippage. And it is entirely free of warpage. Available in 10 pleasing colors. Architect: Marcel Breuer, New York City.



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CRITICIZES CHURCHES

Dear Editor: Disclaiming to be a pioneer, admitting my sympathies with contemporary architectural effort were slow in coming and knowing a little about religious practices, I find justification in the church at Austin, Texas, with which you have illustrated your August number, for the charge of superficiality in design as a characteristic of much "modern design."

For a church of the old, inefficient cruciform plan to find its way into a publication describing itself as progressive is surprising indeed. The actions of devotion are twofold. Worship is offered towards the sanctuary, homilies are received from it. The altar, the priest at the altar, the crucifix on the altar are focal points. The congregation are an audience for receipt of works from the pulpit.

Obviously the auditorium form, properly designed, is the only progressive plan for a church. The action is com-

parable to that in a theater which is designed for easiest and maximum concentration of the audience on the local stage and the easiest and maximum receipt of sounds emanating from the stage. In this church, wall treatments are about the only thing characteristic of the "modern."

The church at Minneapolis, Minnesota, seems to me also to have missed an opportunity for more progressive religious thinking in one respect. The sanctuary wall as illustrated on page 44 composes poorly in my view. In the first plan the conventional window above the altar prevents concentration upon the altar, since light becomes the strongest feature at that end of the church. And very tiring to the eyes it is.

And something definitely seems to have gone wrong in the relation of the crucifix on the tabernacle to the top of the reredos which bisects the Corpus' head.

BERNARD HEATHERLEY
Rochester, N. Y.

BETTER LIGHTING

Dear Editor: Just a note to tell you what a swell article I think Williams has written in "Design for Sight Saving." (August 1949 P/A.)

Having spent quite a little time on the technical phases of this same thing, this article expresses what architects should do about lighting better than any I have ever read.

KENNETH C. WELCH
Grand Rapids, Mich.

LEST ARCHITECTS FORGET

Dear Editor: The Minimum Elevator Specification described in the June issue of PROGRESSIVE ARCHITECTURE should be very helpful, but we feel that it restricts by omission, in discussion of many of the items.

The specification is designed to cover electric powered machines only. The Steam Air-Hydraulic Elevator, made famous by Craig Ridgway & Sons Co., could scarcely be pictured in the article, although its use in freight handling eliminates several of the limitations and difficulties described in the electric specification.

For instance, in regard to item four, we point out that, while increased car speed increases the rate of power use, it does not necessarily increase the connected electric load for our freight elevators. This may be a vital factor in multiple installations where peak loads are an important consideration.

Our freight elevators eliminate item 7 entirely, since proper leveling is an inherent part of the control system, and not an additional device.

Because these machines were powered by steam more often than compressed air, many architects, following the trend away from steam power in general manufacturing, have forgotten the many advantages and the fine performance records of the vapor-powered, hydraulic-controlled freight elevator.

Since these machines are being specified by property owners who have long (and frequently, comparative) records of their dependability and economy, it would be well for architects concerned with industrial buildings to refresh their memories on the freight elevator that has given them and their clients real satisfaction over half a century.

MARVIN C. MOFFETT, Manager
Moffett Manufacturing Co.
Coatesville, Pa.



Views of contemporary architects noted for their stimulating work in the San Francisco Bay area were heard last month in a forum sponsored by Macy's San Francisco department store, highlighting an exhibition of architectural drawings and photographs which included the 11-panel exhibit of prize winners and mentions in the P/A Awards, 1948 (see June 1949 P/A). Another event of the exhibition period, which extended from August 8 to August 20, was a similar forum on decorating problems. The architects participating, shown above with Moderator Hal Cruzan (right, holding one exhibit under discussion), included Henry Hill, Fred Langhorst, Donn Emmons, Ernest J. Kump, and Mario Corbett.

Photo: Macy's San Francisco

(Continued on page 10)

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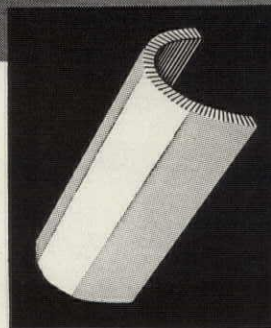
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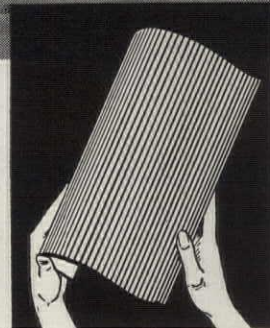
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Views

(Continued from page 8)

WELL, WHY?

Dear Editor: Anent the P/A Awards competition—why are buildings inspired by Wright labeled Derivative, while buildings with Van der Rohe or Neutra antecedents are not so apologetically designated?

CARL MASTON
Beverly Hills, Calif.

ARCHITECT THE LOSER

Dear Editor: Liked your fine piece on the client. I guess we are pretty poor souls, too! I just wonder why nobody minds to go to the doctor without asking questions and paying any bill he'll get, by the next month. Although we might get an idea: if we should ask how much this operation or those

injections will cost. No doctor is telling you what the total costs of his experiments will be or when you'll be cured, if ever. Of course, the doctor's patient is intimidated by fear. The architect's client doesn't consider it a matter of life or death whether he gets a good house. His money is worth more than his life.

HEINRICH H. WAECHTER
Brighton, Mass.

SIMPLER APPROACH

Dear Editor: May I add my congratulations to the thousands you should receive for your article on OFFICE PRACTICE, published in the July issue.

I concur with your premise, that "two-bit" words, and perhaps thinking, will enhance our profession much more than \$64 ones.

Your recent personal efforts in the interest of comprehensible sanity are a refreshing contrast to the too generally published nonsense; in particular, the oozy thinking of that great molder of minds, the "Forum of Equivocal Larnen."

March on, Creighton, poor soul.

IVAN W. MEYER
Seattle, Wash.

MULTIPLE WINS

Dear Editor: "Speaking of Multiple Wins in Competitions," page 138, July P/A, you might be interested in the fact that the house designed by Chloethiel Woodard Smith for Dr. David Rioch and the one designed by the writer for his own residence were the residences selected in the Washington-Metropolitan Chapter's Honor Awards Judgment and were also the only residences given certificates in the "Washington Board of Trade Awards in Architecture," page 16, July P/A.

Incidentally, both of contemporary design in a traditional city.

HARRY E. ORMSTON
McLean, Va.

NOTICES

NEW ADDRESSES

MESSINEO & MESSINEO, Architects, Suite 202, 114 N. 3rd St., Las Vegas, Nev.

DANTE J. D'ANASTASIO, Architect-Engineer, 1815 Federal St., Camden, N. J.

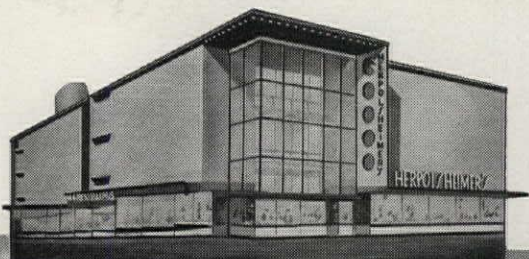
W. POPE BARNEY & ROY W. BANWELL, Architects, 2408 Girard Trust Co. Bldg., Philadelphia 2, Pa.

WILLIAM SCHORN ASSOCIATES, INC., and WILLIAM FRANCIS SCHORN, Architect, 501 Madison Ave., New York, N.Y.

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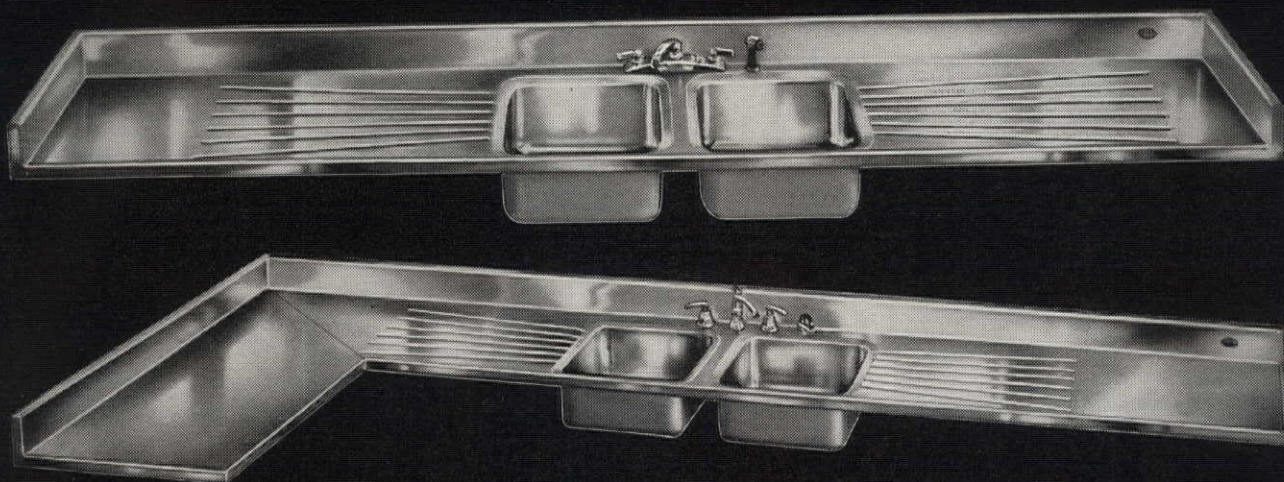
At left, Architects rendering of the new Herpolsheimer store and, below, main floor view of Motorstair installation.



Installed by—The Leitelt Elevator Co., Grand Rapids, Michigan
Architects—Perry, Shaw and Hepburn, Boston, Massachusetts
Contractor — Owen-Ames-Kimball Co., Grand Rapids, Michigan



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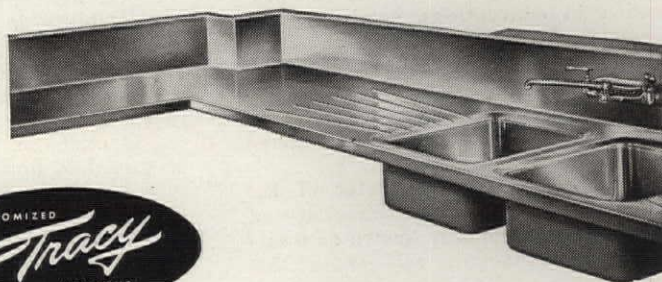
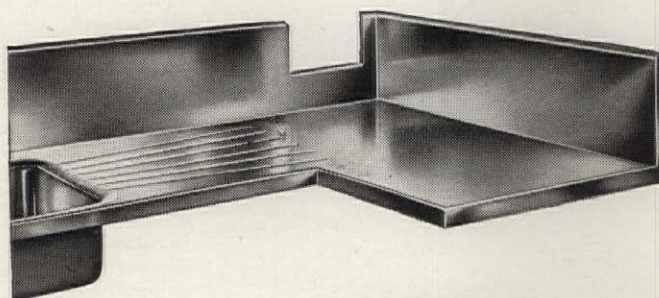
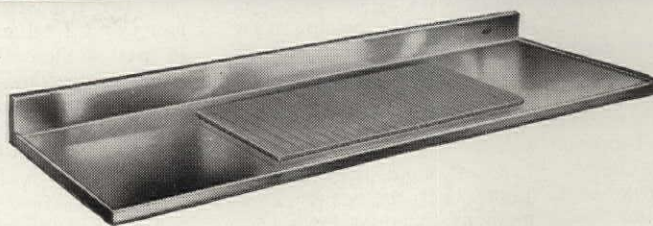
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out of school

By CARL FEISS



Launching a new column is like launching a ship. It may hit the water with a fine splash and float happily out into the harbor, or it may slide swiftly down the ways and sink smoothly beneath the waves, emitting a few inconsequential bubbles. For this launching, the champagne bottle is still to be broken and only heaven knows whether we will sink or swim.

You will wonder why we have launched this at all. One of the main reasons is that there are a lot of us in architectural education who are not certain that the profession itself knows what an architect should be doing. This being the case, it seemed necessary to find out whether the architect has any ideas as to what the educator should be doing.

I don't mean by this whether schools should be teaching working drawings or how many months should be spent on the history of the Gothic Revival in Pawtucket. Architectural schools are full of this kind of formula. Let's not worry about details for a while—gadgets-minded architects are always more interested in detail than they are in broad-scale plans. Let us rather consider for a moment the question—*education for what?*

For what task should an architect be educated? There is a great deal of debate among architects as to their own importance. Among all others there is not much debate on the subject.

Better education for architects has been debated by many members of the profession in conventions, seminars, and periodic school conferences. But a continuing open discussion has not been offered to bring out the opinions and constructive suggestions of all those concerned. This column has been started to fill this need.

Carl Feiss, A.I.A., Director of the School of Architecture, University of Denver, and nationally known as a city planner and educator, will conduct this new feature of P/A. For this month it is given the position usually allocated to **PROGRESS REPORT**, which will be resumed in our October issue. Watch for the regular **OUT OF SCHOOL** in another section of the magazine.

Hardly an architectural meeting takes place in which we are not preening ourselves, and yet if we conscientiously review the situation of architecture and the position of architects in the United States today in relation to other professions and other businesses, there is grave doubt that we stack up as well as we hope we do.

As I scan the cities through which I pass or over which I fly and see the great multitude of buildings composing these ugly, chaotic agglomerations of masonry, steel, and glass, I wonder why the American public has not been more severe with its architects and planners. Our vast areas of slums, our monotonous and stupid subdivisions are testimony enough that the practicing architect is not yet sufficiently educated to know how to make his *enterprise* felt (or isn't that, in your opinion, a function of education?). Or the public is not sufficiently educated to know when to use design competency or technological proficiency, if either exists.

To the best of my knowledge, and I welcome the readers' assistance on this point, there is no accurate figure as to the amount of building in the United States for which architects are responsible. The figures range anywhere from 5 percent to a highly questionable 80 percent. Obviously if 5 percent is correct, the architect should be ashamed of his small performance. If 80 percent is correct, the architect should be ashamed of the quality of his performance. If 21 billion dollars are to be used for construction and capital goods expenditure in 1950 (as estimated in J. Frederick Dewhurst & Associates' invaluable book, *America's Needs and Resources*), what percentage of this expenditure falls rightfully under the jurisdiction of the architect?

If the architect has not had a large responsibility in the construction volume in the past, it would be a pretty good idea to find out why. If the architect cannot see the potential in urban redevelopment and many other forms of construction in the future, it would be useful to find out why. If architecture holds no significant place in the program for world order, it would be wise to find out why.

Granted that a world in revolt is difficult to understand and to live with; granted that the political and economic chaos and the tragedies of modern times naturally induce a desire on the part of all of us to find a nice little cave and pull it in on top of us;

granted even the chaos of modern technological advance. The fact remains that an architect with a real interest in becoming an educated man should be encouraged to find out for himself where his talents lie, beyond what he has considered up to now his normal call of duty. And the fact remains, dodge it as we will, that in retiring into his self-defined "professional" shell the American architect has indulged himself with weak substitutes for responsible action as a citizen in his own community.

Schooling is a very small part of education; also schooling becomes obsolete overnight as world conditions change. In the not too distant past we have many examples to indicate that the school training of the average architect was inadequate to make him adaptable to fluctuations in either the economic or social norm. In fact there are few better examples to be found of overspecialization in modern society than in the architectural profession. There is almost nothing in the tattered remnants of our Beaux Arts atelier system in formal architectural education which relates the drafting table to the modern world.

So this new column in **PROGRESSIVE ARCHITECTURE** will raise these questions: whether the architect in the United States is an educated man; for what role in the community he should educate himself and encourage education of neophytes; and how education—in the schools and out—should be conducted toward the ends that seem desirable.

Your definition of education and mine will undoubtedly differ. Probably every reader is certain in his own mind that in terms of his background and training he is as well educated, if not better educated, than the next man. So perhaps we should all think in terms of educating that next man. I am eager to explore with you the possibilities of expanding architecture into a responsibility beyond our present concepts, to enlarge our opportunities for service, and at the same time to broaden ourselves as wise men.

With this in mind as the purpose behind our column (and the insults I have just thrown at you) we eagerly solicit your ideas and we welcome discussion.



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Above and below: Interior view of the Star Market. H. L. Feer & Wm. E. Nast of Boston, Architects. Mark Linenthal, Boston, Mass., Engineer. W. H. Porter Co., Watertown, Gen. Contractor.

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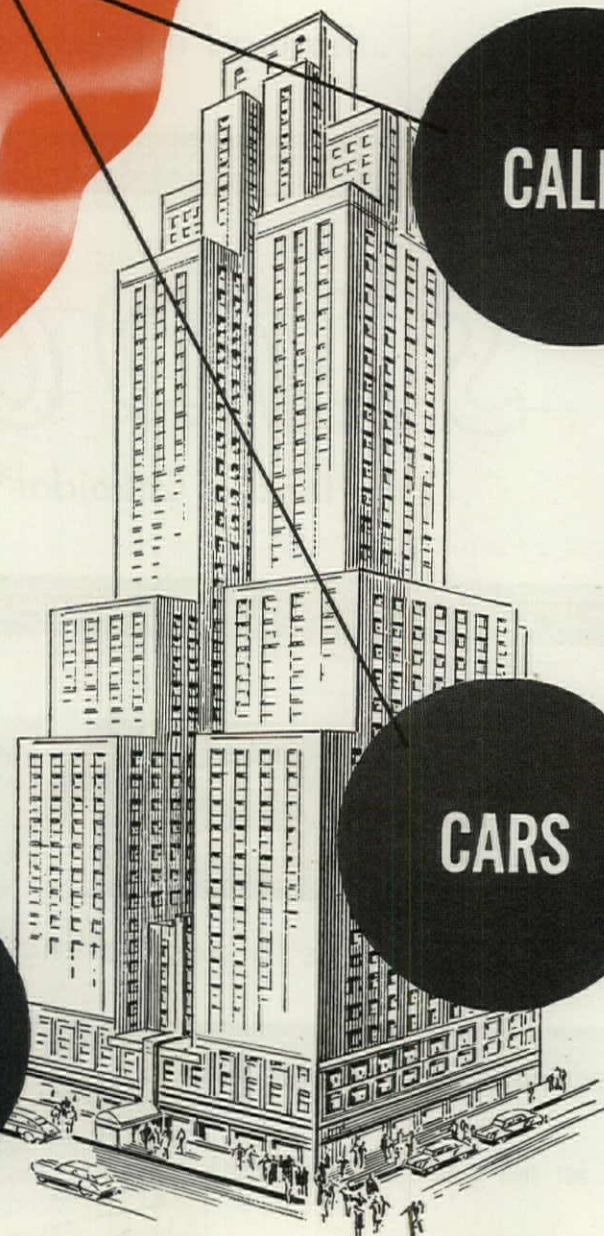
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Yes—it's a Flexstone* Roof

Each ply is a flexible covering of stone!

● The secret of a Johns-Manville Flexstone Roof is in the felts. They're made of fireproof, rotproof, enduring asbestos.

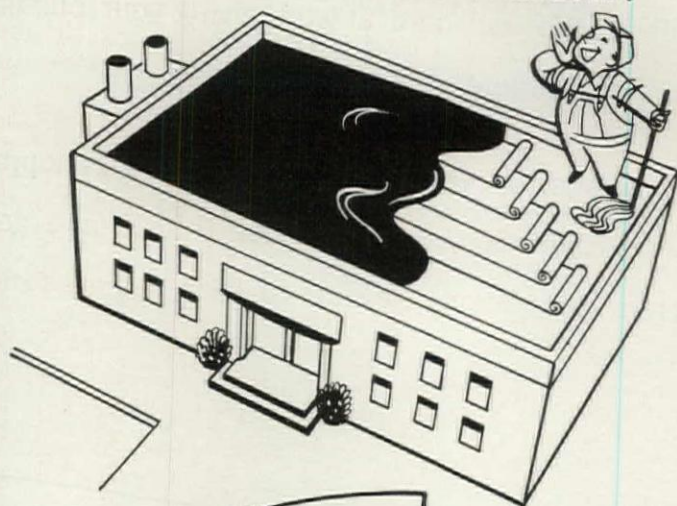
Flexstone Built-Up Roofs won't dry out from the sun . . . need no periodic coating. They're smooth-surfaced, too—permit thorough drainage . . . make any damage easy to locate and repair. They are engineered to each job . . . applied only by J-M Approved Roofers.

J-M Asbestos felts are perforated to make application easier . . . give you a smoother job and conform better to irregularities in the roof deck.

Send for Flexstone brochure BU-51A. Contains complete specifications. Address: Johns-Manville, Box 290, New York 16, N. Y. *Reg. U. S. Pat. Off.



"THAT'S NOT ALL. NO SLAG OR GRAVEL! NO EXCESS WEIGHT!"



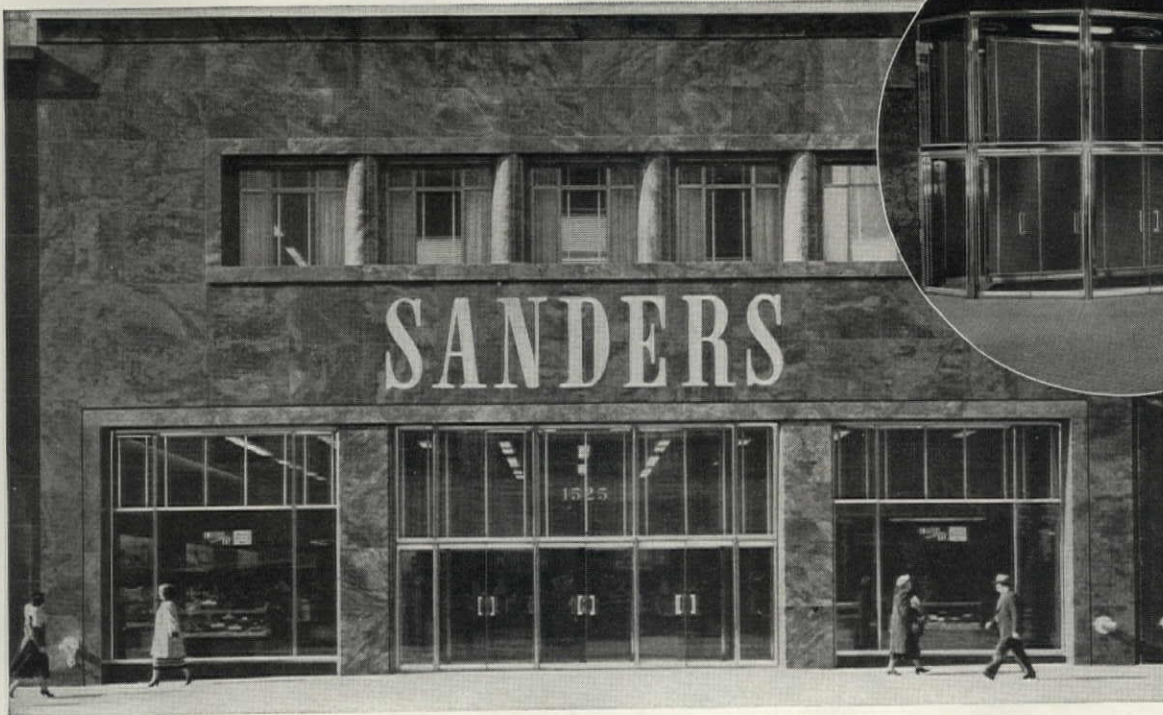
Made of ASBESTOS

Johns-Manville FLEXSTONE* Built-Up Roofs

CORRUGATED TRANSITE* • ACOUSTICAL CEILINGS

DECORATIVE FLOORS • *TRANSITE WALLS • ETC.

Sanders, Woodward Avenue, Detroit.
 Thermopane installed in Brasco Stainless Steel Settings.
 Architects & Engineers: Pollmar, Ropes and Lundy.



More SELLEVISION* *per front foot*

THE emphasis on *Sellevision* in advanced store front design is increasingly evident. *Sellevision* permits the shopper to see deeply into the store interior and to preview its alluring attractions. With the reduced height of Safety-Set metal sections, greater *Sellevision* is actually provided.

The largest plates of glass are held securely in the deeper grip which characterizes all Brasco sash. Heavy-duty bars, substantially reinforced, supply extra protection for enlarged and heightened areas. The complete line is expertly fabricated and handsomely finished in both stainless steel and anodized aluminum of heavy gauge.

Many additional features contribute to Safety-Set's superiority. For nearly four decades we have worked in close collaboration with the country's leading architects and store designers. Safety-Set Construction embodies *their* ideas as well as our own. That's why Safety-Set offers the utmost in practical construction and distinguished appearance, for wisely spent store front dollars. *Write for catalog and details.* * ©

★ ★ A COMPLETE LINE FOR EVERY DESIGN ★ ★

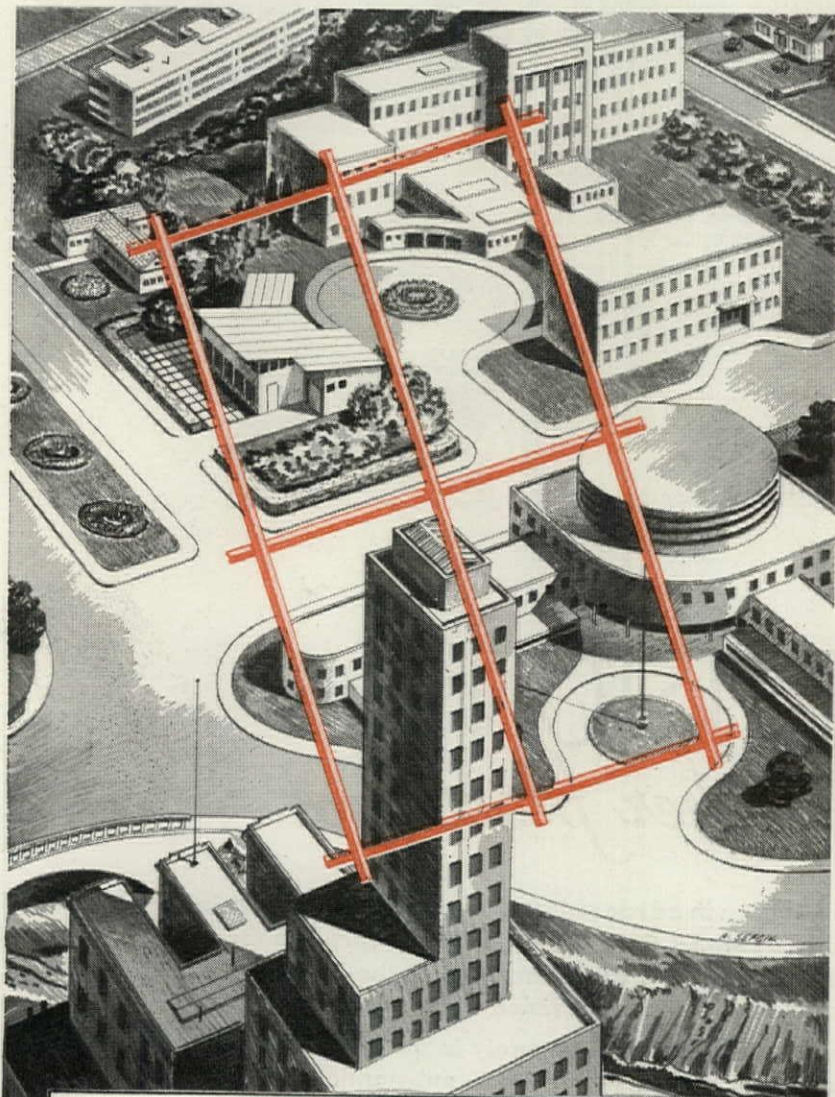
Brasco
 SAFETY-SET
 STORE FRONTS

BRASCO MANUFACTURING CO.
 HARVEY • (Chicago Suburb) • ILLINOIS
 Specialists in Metal Store Front Construction for more than 35 Years

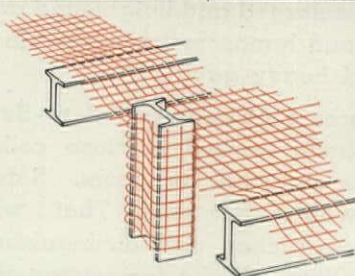
For these two important reasons

specify American Welded Wire Fabric

.....



This sketch shows where American Welded Wire Fabric is used in modern concrete buildings. It reinforces walls, floors and roofs, can be draped over beams and girders and wrapped around pillars. Many uses of concrete in irregular structural shapes are made practical by American Welded Wire Fabric reinforcement.



First it is the most efficient reinforcement. Its many small members of cold drawn, high yield-point steel fortify all parts of the concrete structure. Rolls and flat sheets of American Welded Wire Fabric provide continuous reinforcement in buildings, bridges, tunnels, etc. It can be wrapped around pillars, beams and girders, laid in steps, stairs and other irregular structural shapes.

Second it is the most economical reinforcement. You need less steel, less concrete, when you specify American Welded Wire Fabric, for thinner slabs carry higher allowable stresses. The mesh can be placed quickly and easily, lies flat and stays in its proper place during all construction operations. All of which adds up to important savings in construction time, in material and labor costs.

These are the main reasons why so many architects and engineers specify American Welded Wire Fabric reinforcement for all types of concrete construction . . . not only in skyscrapers, hospitals, and schools, but in fine modern homes and in small home developments as well.

When you are planning any kind of concrete construction our technical staff will be glad to supply complete data on specific design and standard styles of fabric that are available. Write to our nearest office today, you incur no obligation.

AMERICAN STEEL & WIRE COMPANY
GENERAL OFFICES: CLEVELAND, OHIO
COLUMBIA STEEL COMPANY, SAN FRANCISCO
PACIFIC COAST DISTRIBUTORS
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
SOUTHERN DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY

Every type of concrete construction needs

AMERICAN WELDED WIRE FABRIC

reinforcement



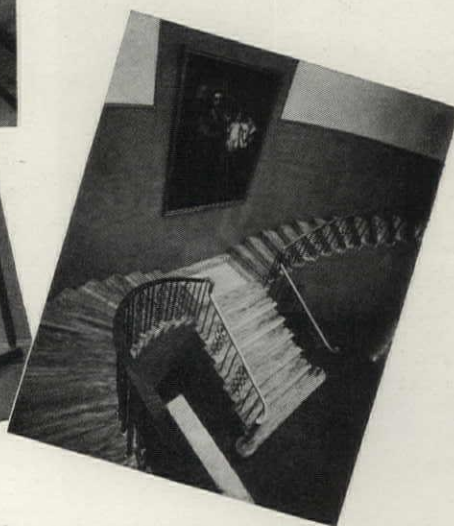
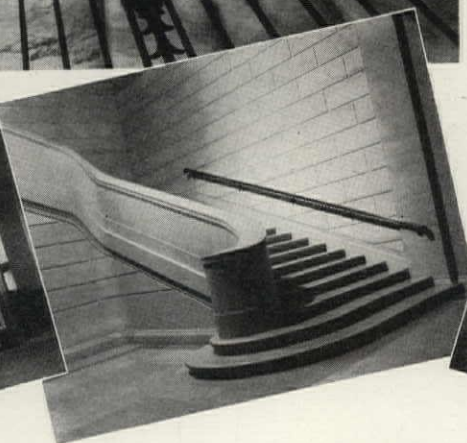
UNITED STATES STEEL

marble

**imposing beauty
that is safe underfoot!**



Marble gives substance to the magic of good design. It is a practical, economical material, noiseless underfoot, safe, sanitary. No other material so completely unites essential, enduring beauty with long life and low maintenance.



The adaptability of Marble to every new trend in good design and its appropriateness for every type of building, makes Marble unique among flooring materials.

*Write
Managing Director
for latest literature
on Foreign and
Domestic Marbles.*

Dept. 39-B.



**Marble Institute
of America, inc.**

108 FORSTER AVENUE, MOUNT VERNON, N. Y.





"Let's Eat!"



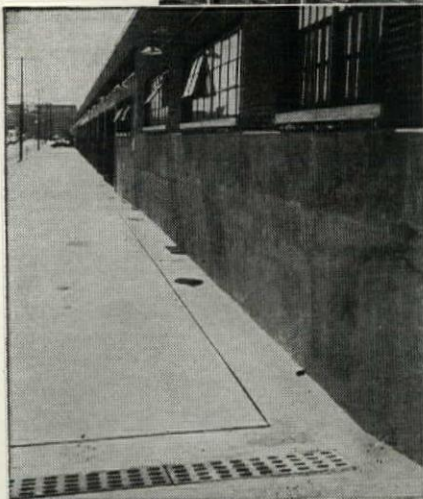
A & P's NEW CONCRETE WAREHOUSE EXEMPLIFIES EFFICIENCY OF WORLD'S GREATEST FOOD-SERVICE ORGANIZATION

IN spanning the gap between thousands of fields and millions of tables, The GREAT ATLANTIC & PACIFIC TEA COMPANY employs the quality approach to quantity merchandising. Witness this new Produce-and-Meat Warehouse, covering an entire city block in Newark, N. J., linking food supply sources with great super-markets. Each kind of produce has its own storage conditions. Inside loading is provided—rail on one side—trucks on the other, with 21 motor-operated doors.

Top-grade construction—one of a number of projects built for A & P by WM. L. BLANCHARD CO., Newark. The 6,000 cu. yds. of concrete were designed for 5,000 lbs. compressive strength—readily achieved with Lone Star Cement and concreting know-how. Such structures exemplify efficiency that makes A & P Number One on the Eat Parade!

FALL CONCRETING REMINDER: Use 'Incor'* 24-Hour Cement—protect against sudden temperature drops. Without protection at 50°, common Fall condition, 'Incor' concrete attains stripping strengths, is safe from freezing, 2 or 3 days sooner. For timely illustrated booklet, "Cold Weather Concreting," write us at 342 Madison Ave., New York 17.

*Reg. U. S. Pat. Off.



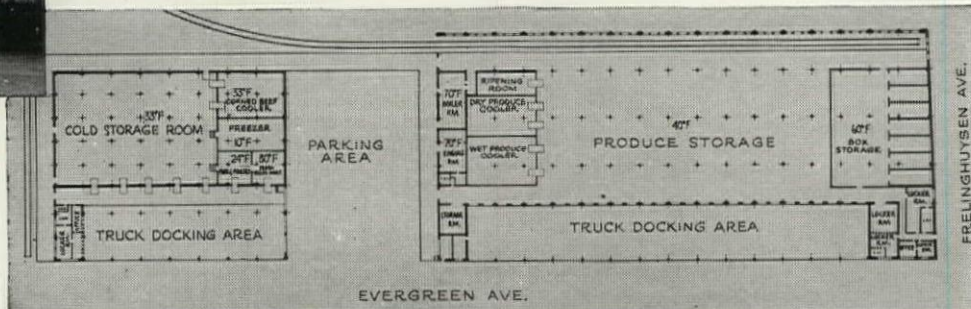
Built by WM. L. BLANCHARD CO.,
Newark, N. J.

Architects: STAAB & STAAB, Newark

Ready-mix Lone Star Concrete:

J. P. CALLAGHAN COMPANY,
Harrison, N. J.

Lone Star Cement through:
F. BOWDEN COMPANY, Newark, N. J.



LONE STAR CEMENT CORPORATION

Offices: ALBANY • BETHLEHEM, PA. • BIRMINGHAM • BOSTON • CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS • JACKSON, MISS. • KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK • PHILADELPHIA • ST. LOUIS • WASHINGTON, D. C.

LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST CEMENT PRODUCERS; 15 MODERN MILLS, 27,000,000 BARRELS ANNUAL CAPACITY

PROGRESSIVE ARCHITECTURE-UNITED STATES JUNIOR CHAMBER OF COMMERCE COMPETITION

report of the jury

The Jury was asked to consider 285 submissions, based on a program that called for an air-conditioned, fireproof office building to house the national headquarters of the United States Junior Chamber of Commerce, in Tulsa, Oklahoma. Competitors were asked to pay special attention to provision of a War Memorial. Functional requirements included spaces for administration, general office work, magazine staff, production, accounting, storage, mechanical, and miscellaneous services. Provision for future expansion was mandatory.

The first prize was the architect's commission to design the headquarters building. Three other prizes and 20 honorable mentions were awarded, and 10 special prizes were given for the best use of the products of the two sponsors—Servel Inc. and General Portland Cement Company.

The Jury considered that the problem was a very difficult one for the time that was allotted to competitors. The site, sloping in two directions, was interesting but not an easy one to find a solution for: climate in Tulsa is extreme in both hot and cold weather; and the cubage limitations set by the program were tight. Considering these aspects of the problem, it was felt that the general quality of the drawings submitted was good. Many interesting and perfectly feasible plan solutions were included among the entries; many of them, on the other hand, made an essentially simple planning problem seem extremely complicated. All of the four top entries have the makings of exciting solutions, solve the technical aspects of the problem well, and show quite a range in feeling.

Of the buildings that remained in the final evaluation, almost none showed a complete realization of climatic conditions in the Southwest. Having provided large glass areas, many competitors then felt it necessary to indicate vertical or horizontal louvers which would obstruct vision. The Junior Chamber of Commerce had hoped that the memorial character of the building would be expressed by forward-looking solutions, and in most cases the contestants succeeded in this objective.

The sponsors were anxious to have the competition produce imaginative and practical solutions using

their products (Trinity White Portland Cement and Servel air-conditioning equipment). Many of the entries succeeded in this respect—a number of excellent designs in concrete were submitted, terrazzo was often well used, and in a great many cases the air-conditioning problem was carefully considered and well solved.

first prize

This solution appealed to the Jury as a practical, workable scheme which has an exuberance not apparent at first glance. The simple rectangular plan is monumental in itself and would be economical to build; the concrete frame is practical, consistent, and interesting, with a pleasant rhythm. Not only would the structure be easy to build, it would also expand simply and the expansion would not hurt the design.

The building lends itself to air conditioning but needs further study of this problem; the air-conditioning room should be relocated, and better advantage can be taken of unit-type conditioners.

The plot plan is good. Site contours are taken into full consideration and grading would be simple.

Some of the office space could be arranged more efficiently, but the building is flexible enough to allow this. The executive offices are directly accessible from the entrance terrace, and the parking area and truck entrance are well handled for access. In general the Jury preferred truck delivery from Main Street, but it is here well handled on the west side. The large storage area in the basement is accessible both to the rooms above and to trucking.

The skylight was criticized; in the actual building it would not be seen, and it complicates interior partitioning. A clerestory would be easier to handle and more economical.

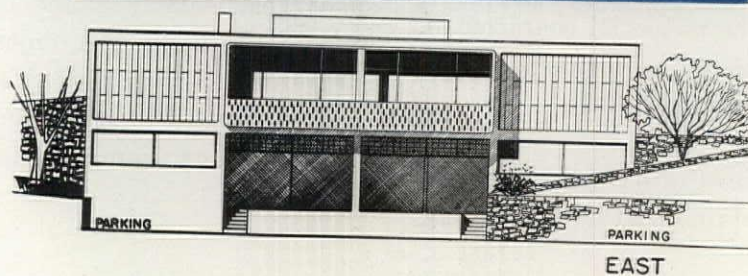
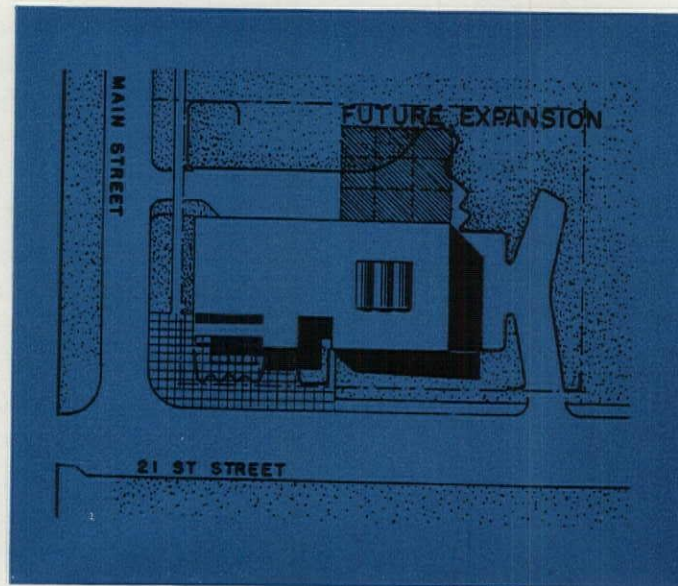
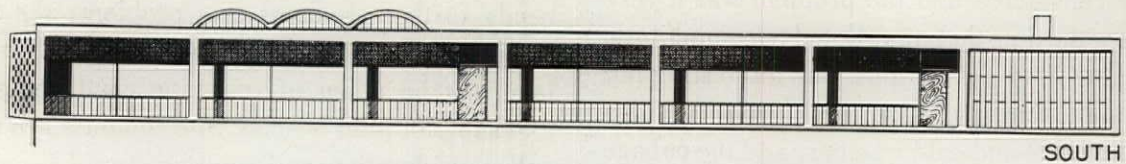
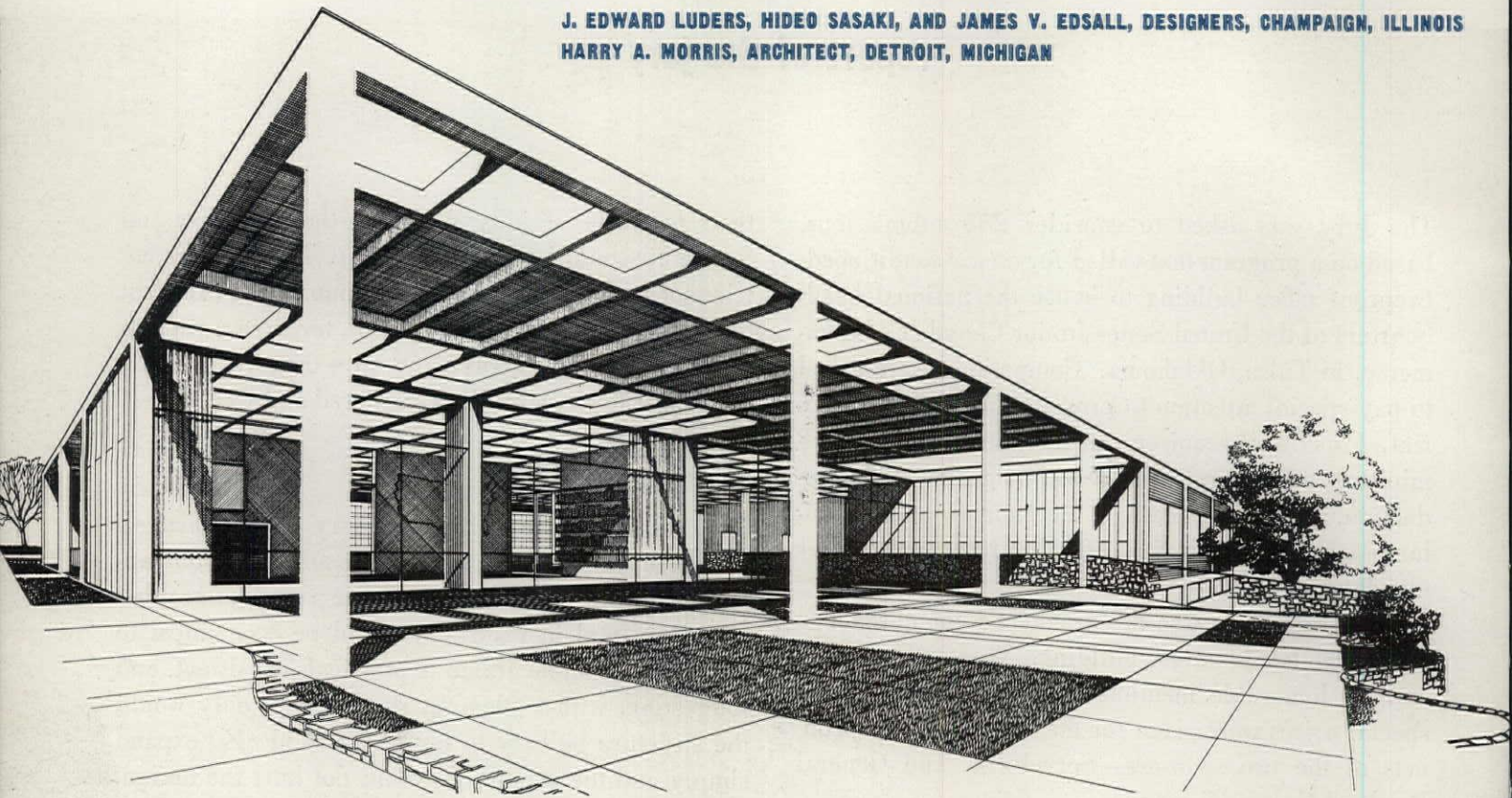
The scale is appropriate to a small building. The perspective gives an overly generous feeling of space (particularly at the entrance terrace) which might not actually exist, unless the designers develop it carefully in their final drawings.

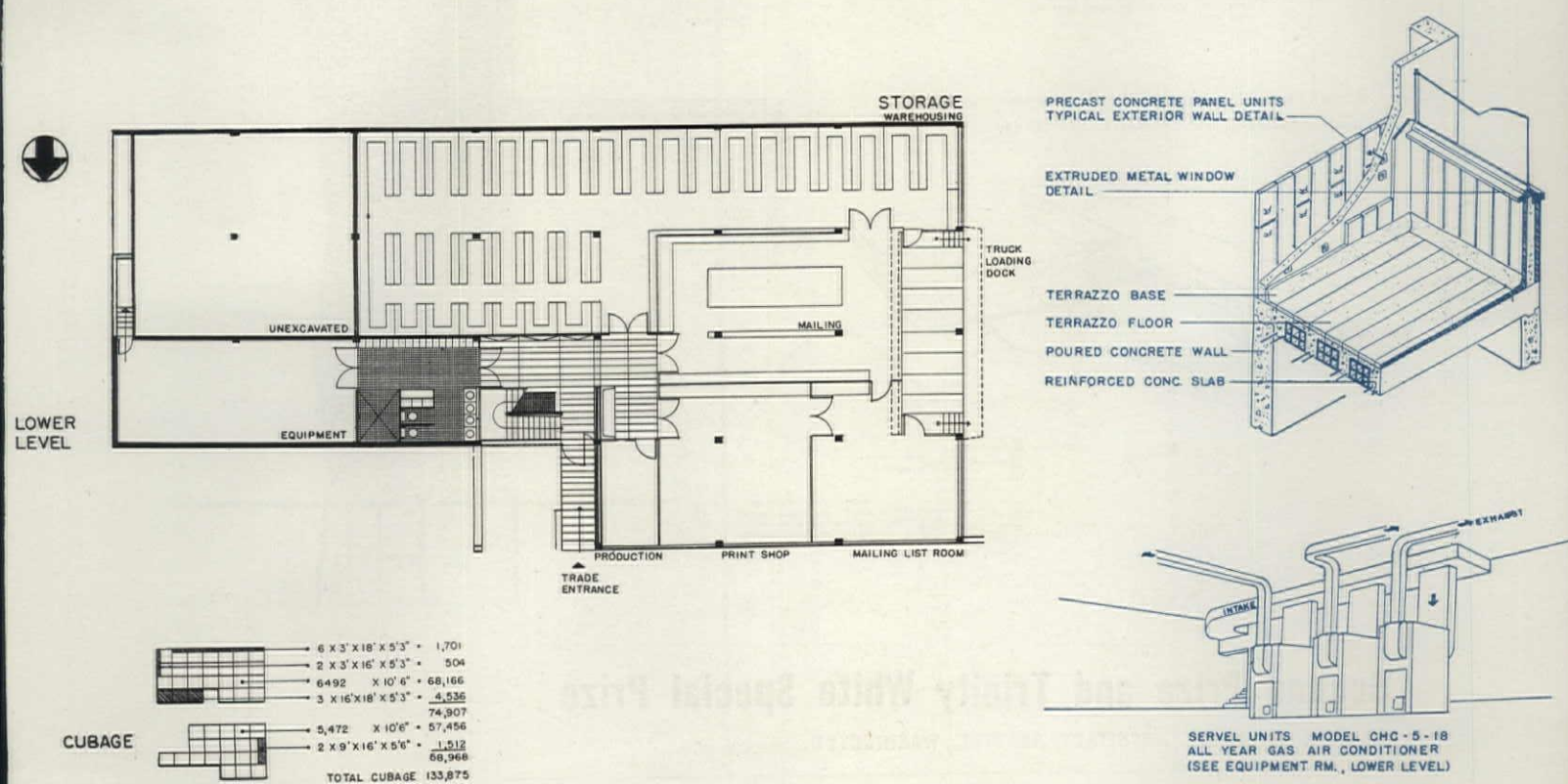
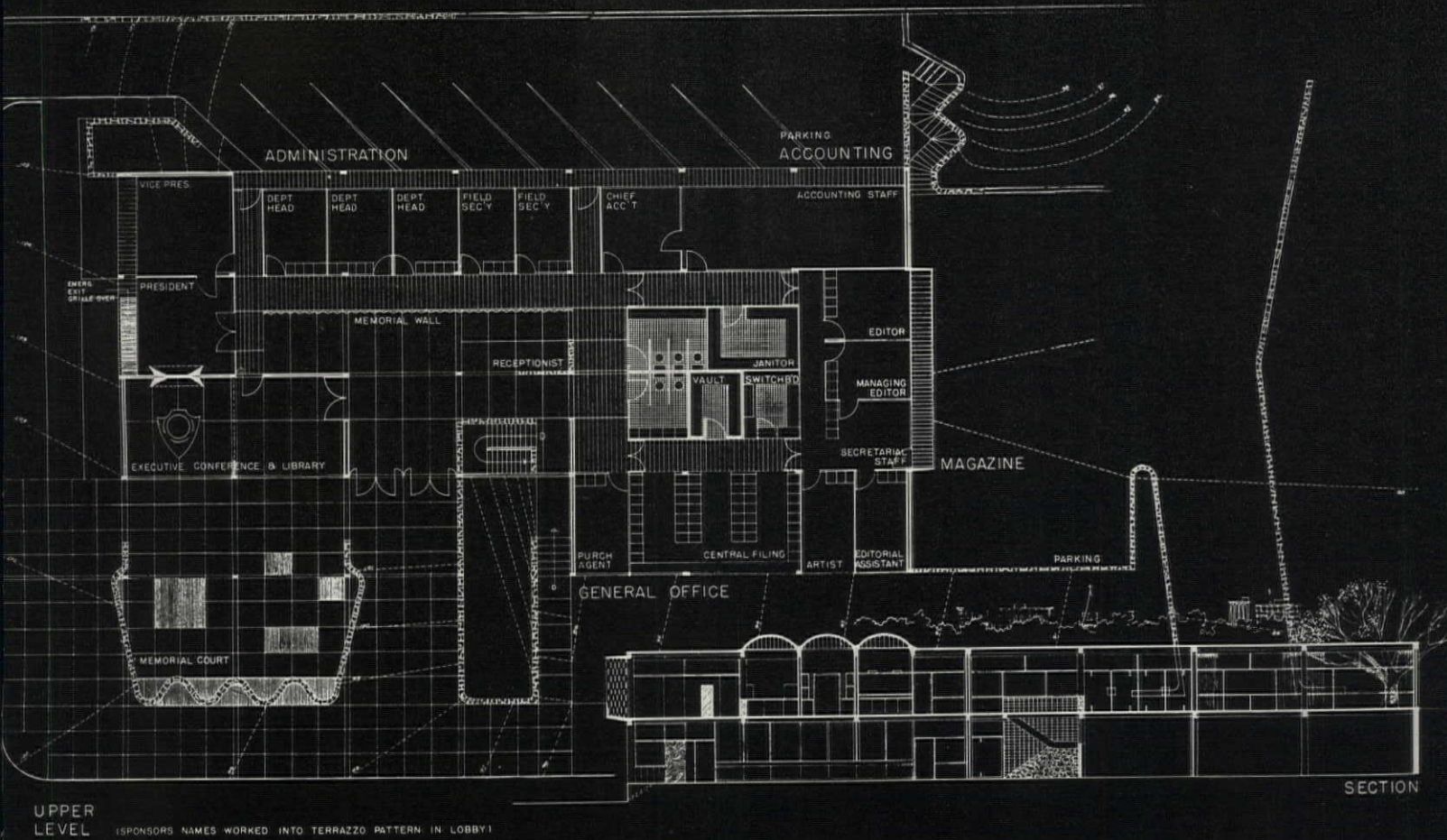
The Jury spent much time in detailed criticism of this building, simply because its members felt that

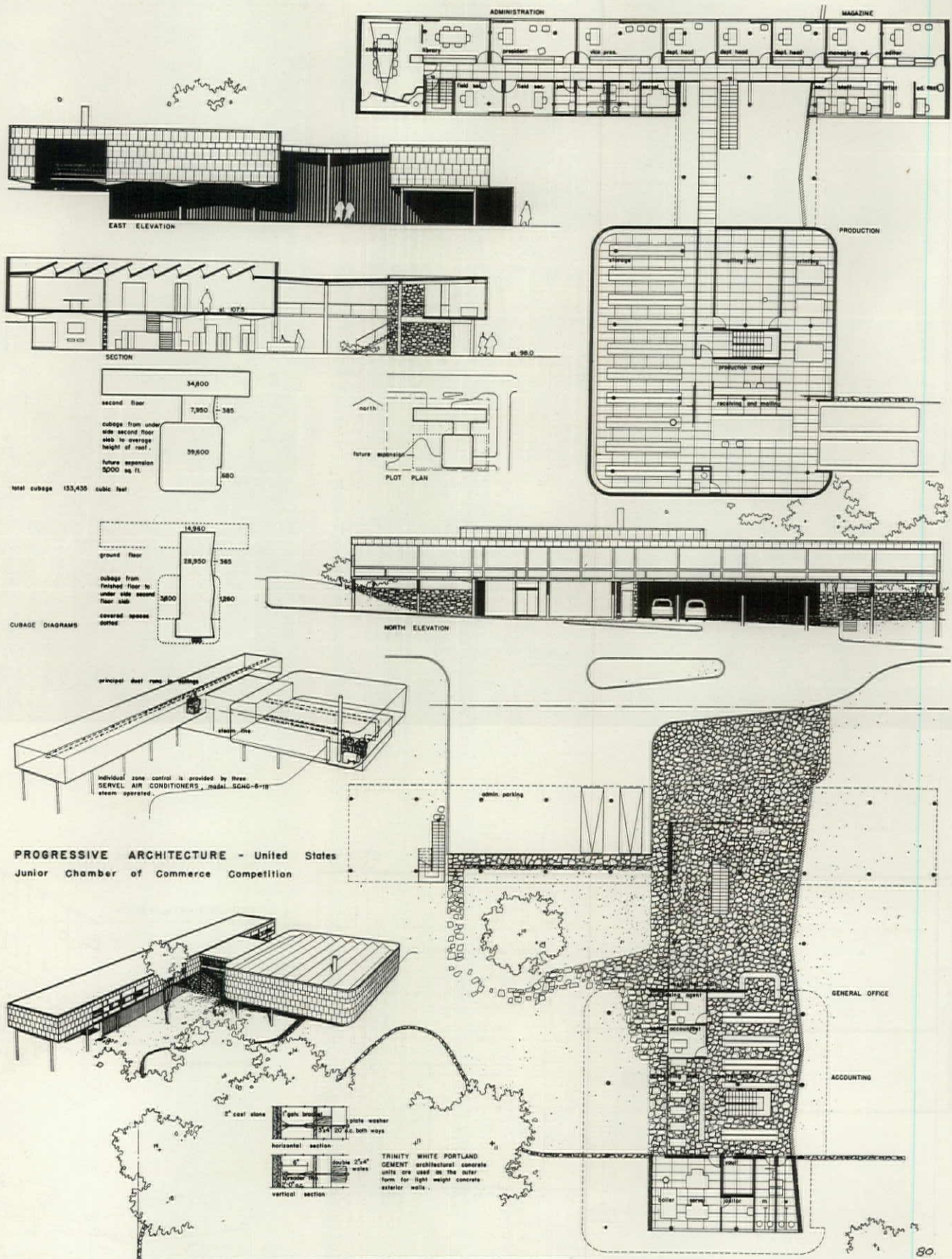
(Continued on page 136)

First Prize and Trinity White Special Prize

J. EDWARD LUDERS, HIDEO SASAKI, AND JAMES V. EDSALL, DESIGNERS, CHAMPAIGN, ILLINOIS
HARRY A. MORRIS, ARCHITECT, DETROIT, MICHIGAN



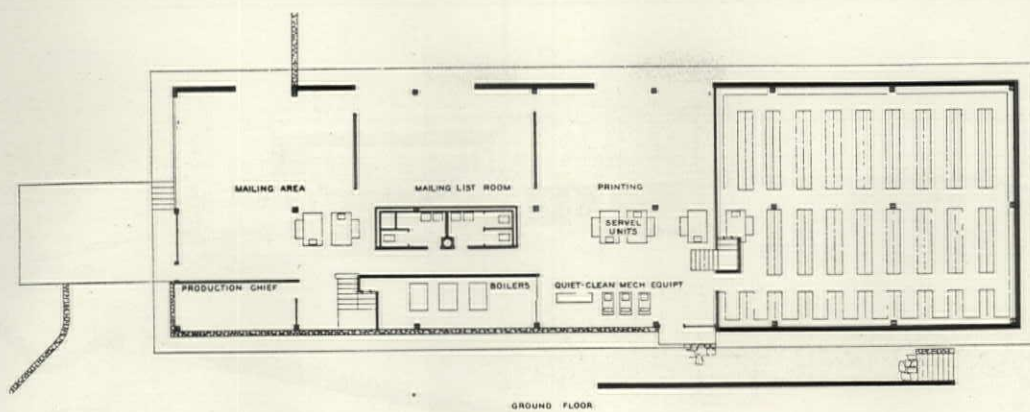




Second Prize and Trinity White Special Prize

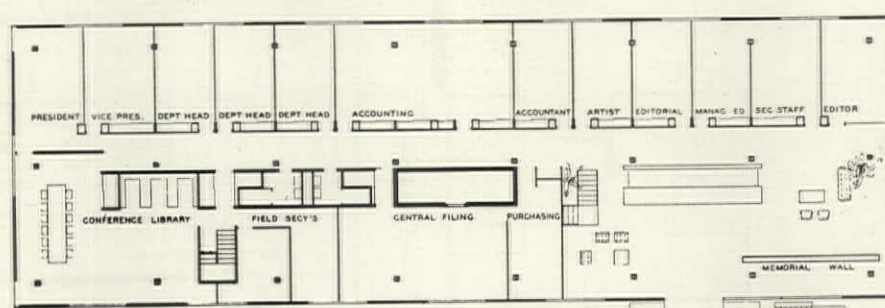
WENDELL H. LOVETT, ARCHITECT, SEATTLE, WASHINGTON

REPRESENTATIVE SECTION OF BUILDING

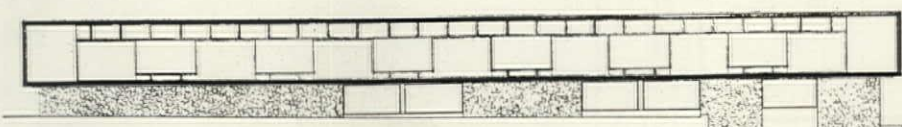
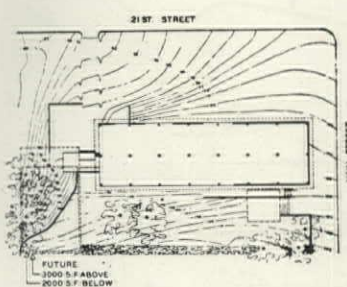


GROUND FLOOR

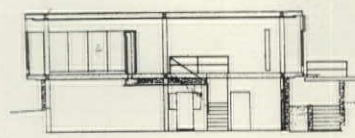
148' x 47' = 10.5' = 71,000
103' x 10' = 1,030
143' x 42' = 10' = 80,840
+ 20' x 8' = 16,472 = 900
TOTAL 133,496 C.F.



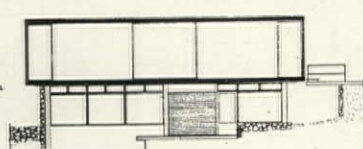
FIRST FLOOR



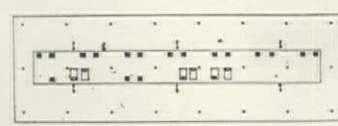
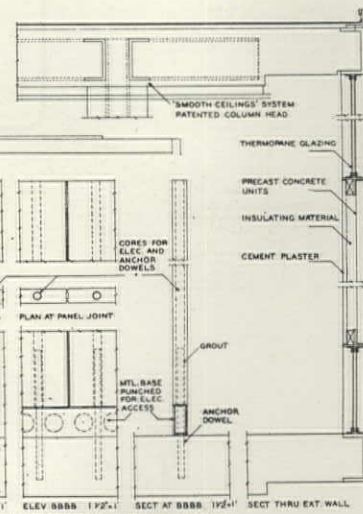
NORTH ELEVATION V6-1



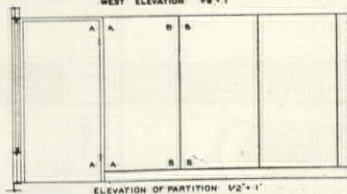
SECTION V6-1



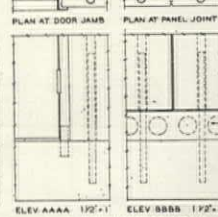
WEST ELEVATION V6-1



REFLECTED GROUND FLOOR CEILING PLAN SHOWING DIAGRAMMATIC LAYOUT OF DUCT CHAMBER RISERS TO FIRST FLOOR AND SUPPLIES TO GROUND FLOOR



ELEVATION OF PARTITION 1/2 x 1'



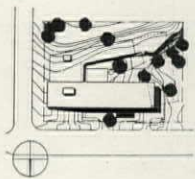
ELEV. AAAA 1/2 x 1' ELEV. BBBB 1/2 x 1' SECT. AT BBBB 1/2 x 1' SECT. THRU EXT. WALL

PROGRESSIVE ARCHITECTURE - UNITED STATES JUNIOR CHAMBER OF COMMERCE COMPETITION

Third Prize

JOHN T. BLACK, ARCHITECT, CHICAGO, ILLINOIS

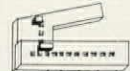
progressive
architecture
united states
junior chamber
of commerce
competition



CUBAGE

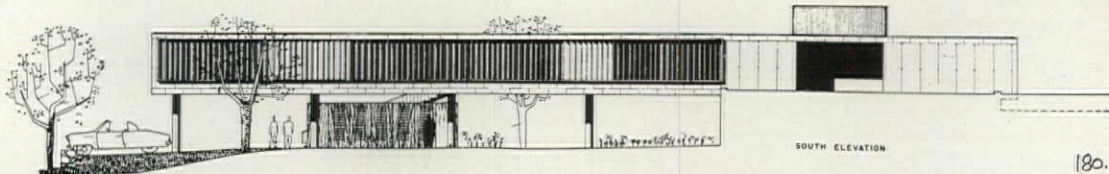
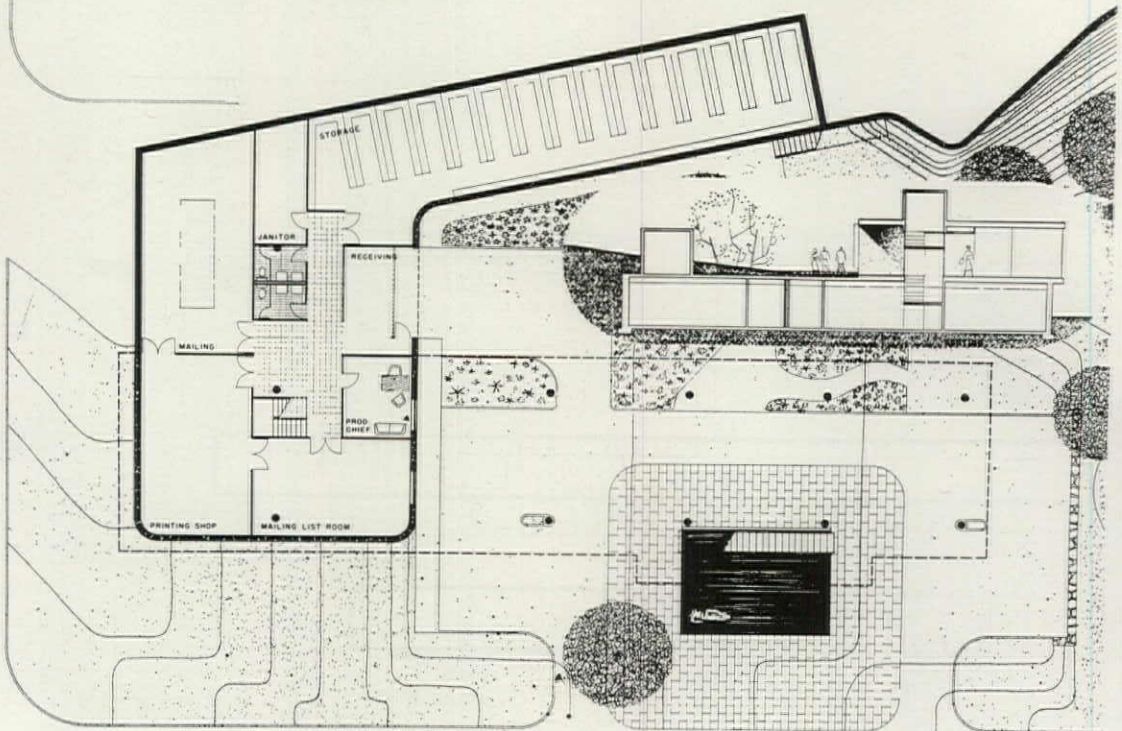
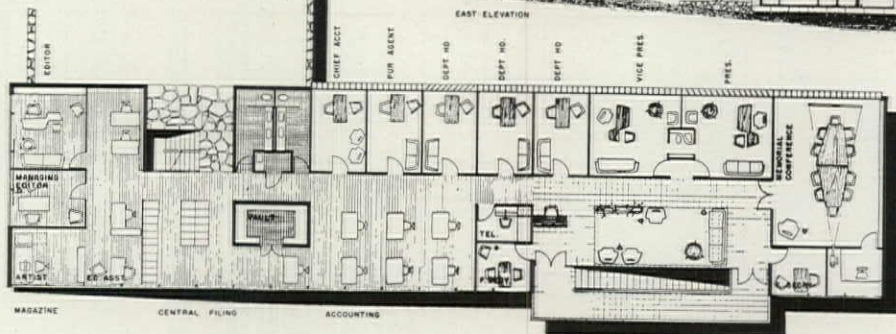
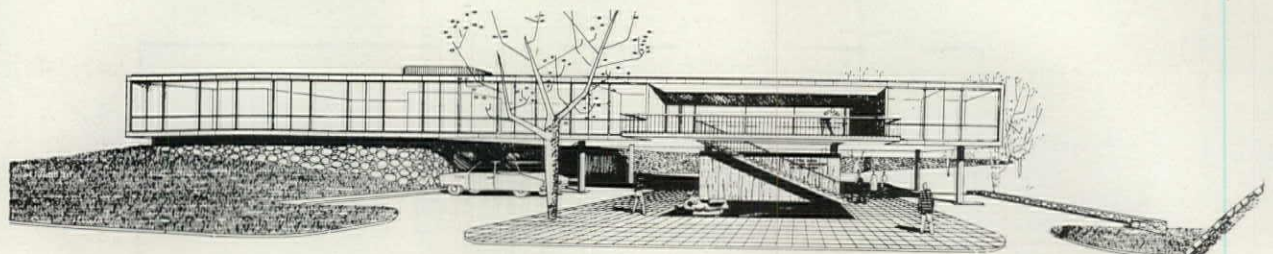
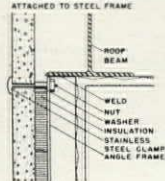
A	51' x 78' x 10'	39780	55110
B	21' x 73' x 10'	15330	
C	37' x 104' x 10 1/2'	39460	19240
D	19' x 10 1/2'	-600	
E	82' x 8' x 10 1/2'	-1050	
F	17' x 8' x 8'	56810	818
G	11' x 9' x 8'	792	
		132768	

MECHANICAL PLANT



TWO SEPARATELY HOUSED ALL YEAR AIR CONDITIONERS WITH ZONED DUCTS ABOVE CORRIDORS PROVIDE ALL HEATING, COOLING AND VENTILATION FOR THE COMPLETE BUILDING.

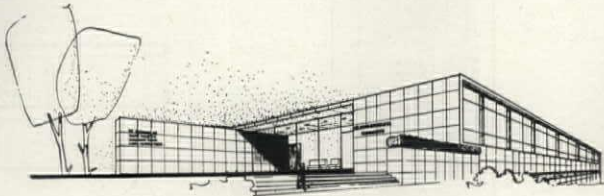
PRE-CAST CONCRETE SLABS ATTACHED TO STEEL FRAME



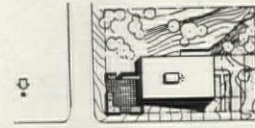
Fourth Prize

CHARLES D. WILEY, DESIGNER, CHICAGO, ILLINOIS
SKIDMORE, OWINGS & MERRILL, ARCHITECTS, CHICAGO AND NEW YORK

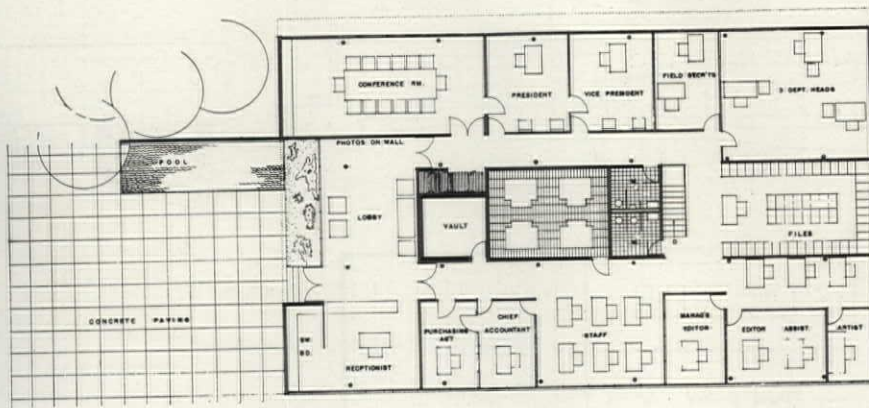
PROGRESSIVE ARCHITECTURE . . . U.S. JUNIOR CHAMBER OF COMMERCE COMPETITION



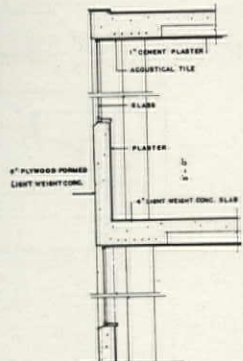
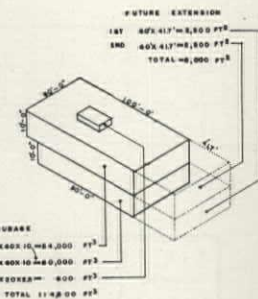
PERSPECTIVE



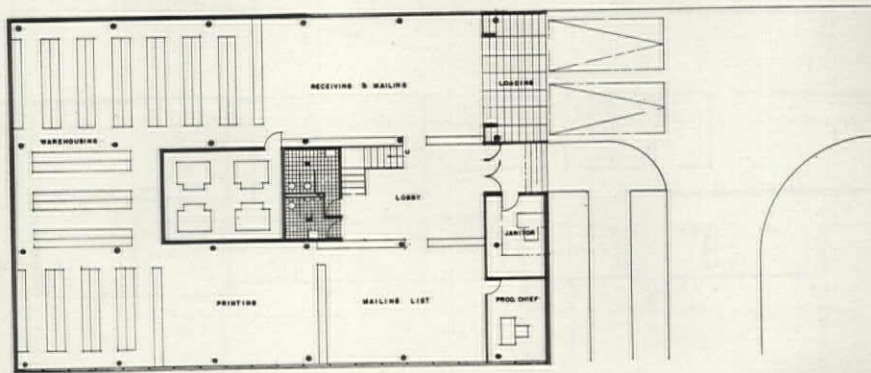
PLOT PLAN



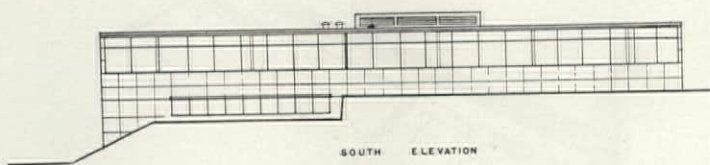
2ND FLOOR PLAN



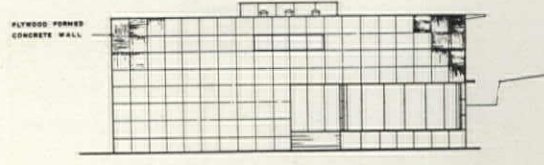
CONSTRUCTION DETAILS 1/2"=1'-0"



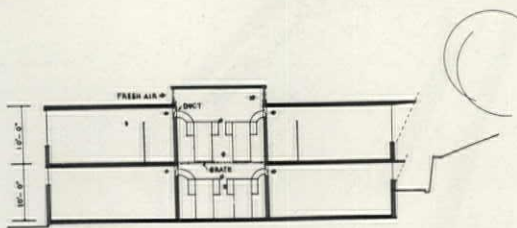
1ST FLOOR PLAN



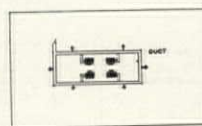
SOUTH ELEVATION



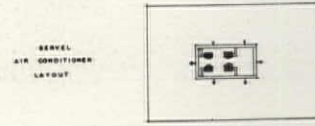
EAST ELEVATION



SECTION



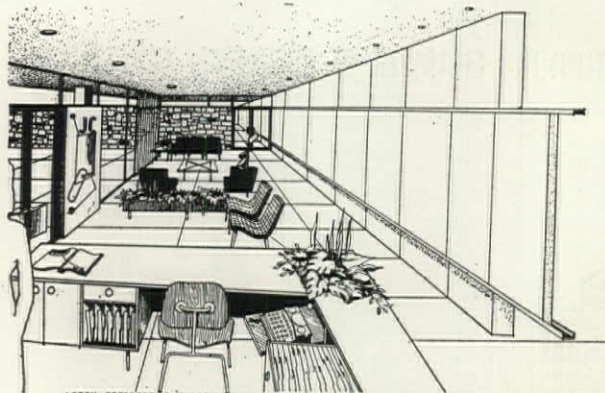
2ND FLOOR



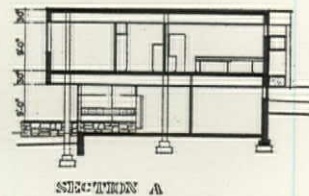
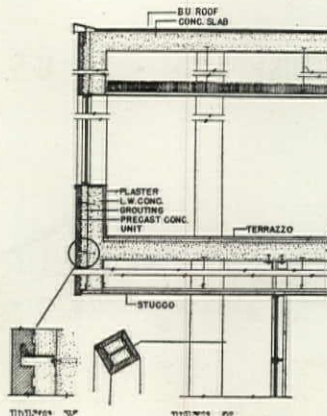
1ST FLOOR

Honorable Mention and Servel Special Prize

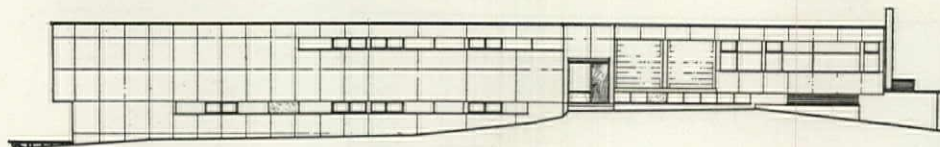
P. Y. CHOW, DESIGNER, SCHOOL OF ARCHITECTURE, COLUMBIA UNIVERSITY, NEW YORK
PERCIVAL GOODMAN, ARCHITECT AND PROFESSOR OF DESIGN



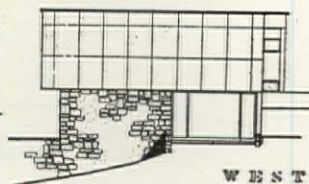
LOBBY PERSPECTIVE FLOOR & SOUTH WALL OF PEARL GRAY TERRAZZO PRECAST DOVE GRAY TERRAZZO PANELS SET IN BRONZE FRAME WITH LOCAL CONTRIBUTORS IN BRONZE, LETTERS INTEGRALLY CAST



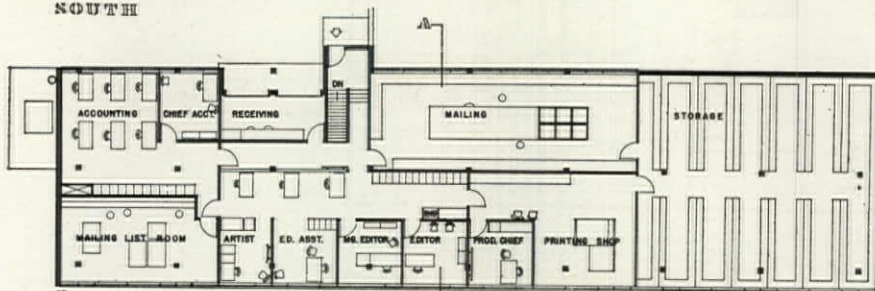
SECTION A



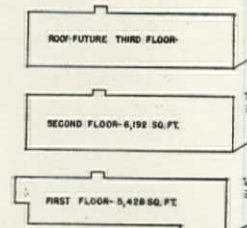
SOUTH



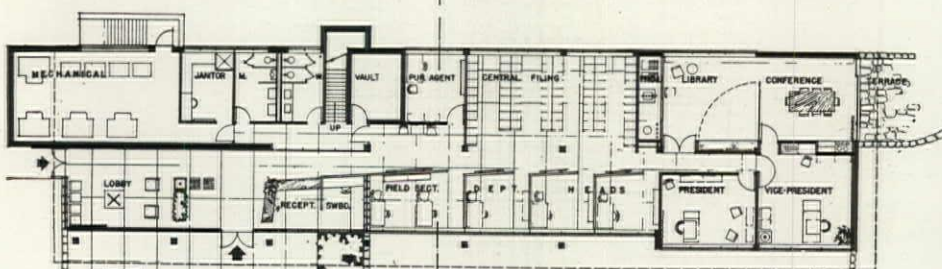
WEST



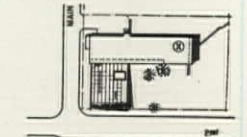
2



ROOF FUTURE THIRD FLOOR	11.5'
SECOND FLOOR-6,192 SQ. FT.	11.5'
FIRST FLOOR-5,428 SQ. FT.	11.5'



1

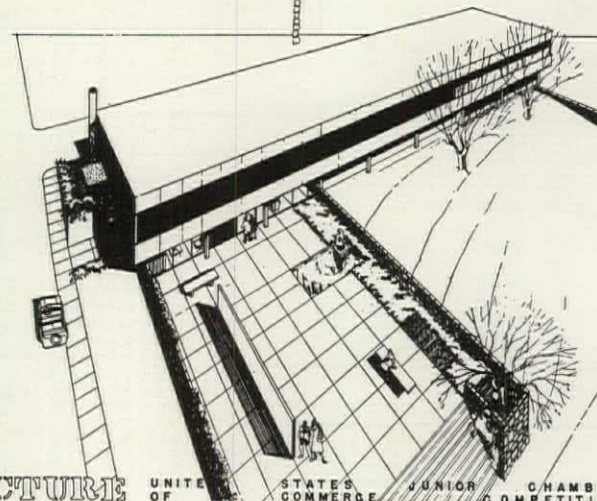


CUBAGE		
FIRST FL.	5,428 x 11.5 =	62,422
SECOND FL.	6,192 x 11.5 =	71,208
TOTAL		133,630

PLAN
① FUTURE EXPANSION THIRD FLOOR 5,000 SQ. FT.



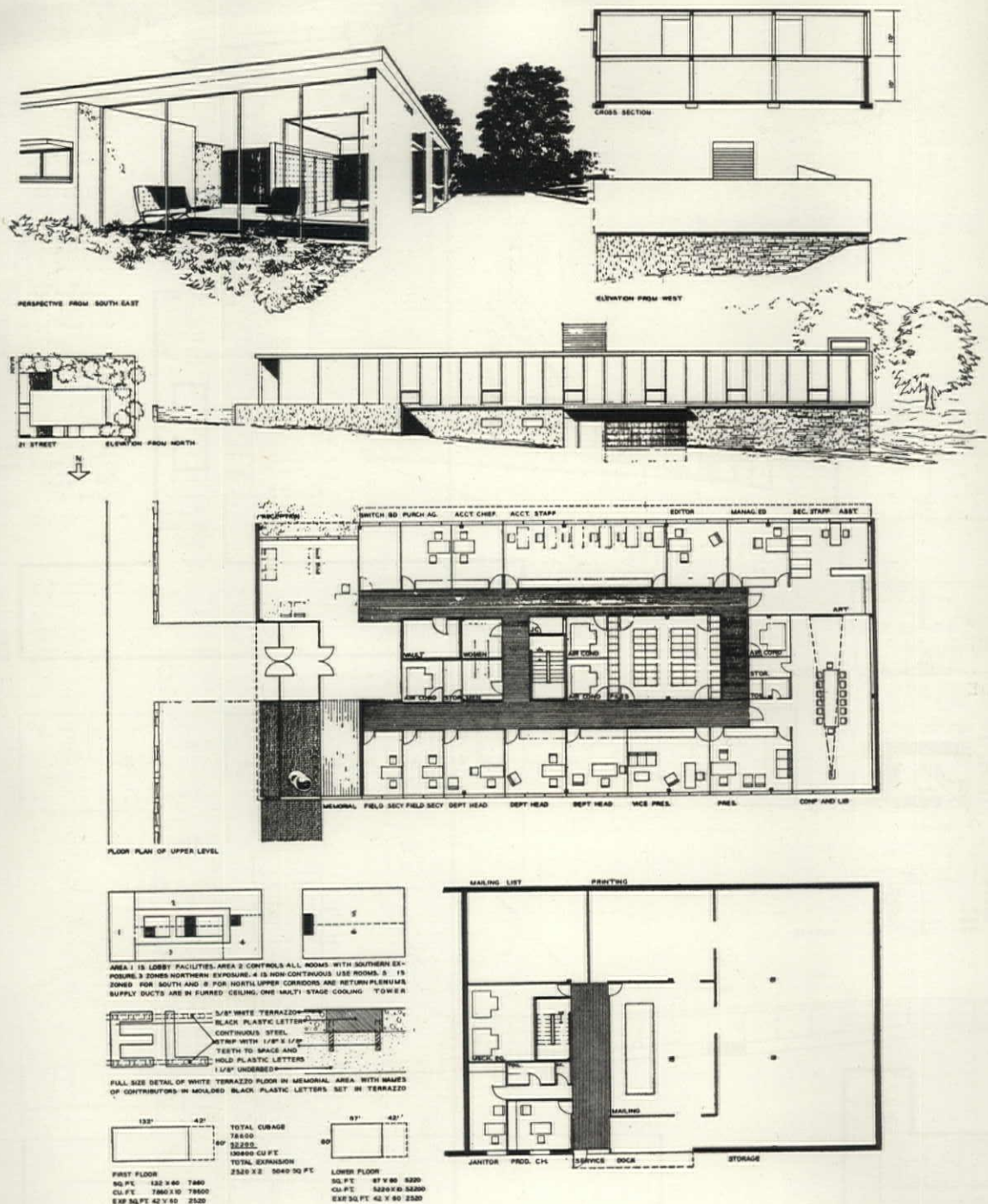
EXISTING TENNIS COURT COVERED WITH TERRAZZO TO FORM ENTRANCE PLAZA & MEMORIAL COURT PHOTOGRAPHS SEALED BETWEEN SHEETS OF Herculite Glass & MOUNTED AS A FREE-STANDING ELEMENT



PROGRESSIVE ARCHITECTURE UNITED STATES JUNIOR CHAMBER OF COMMERCE COMPETITION

Honorable Mention and Trinity White Special Prize

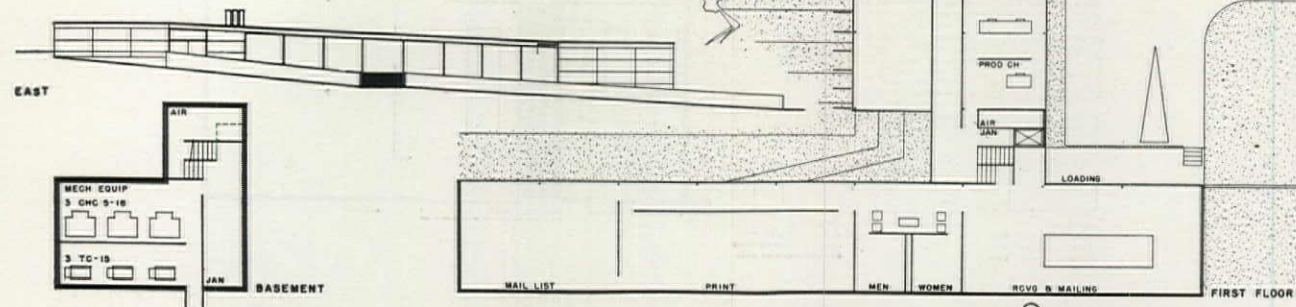
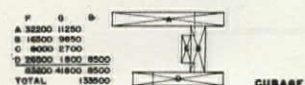
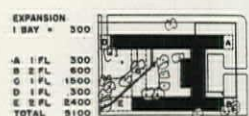
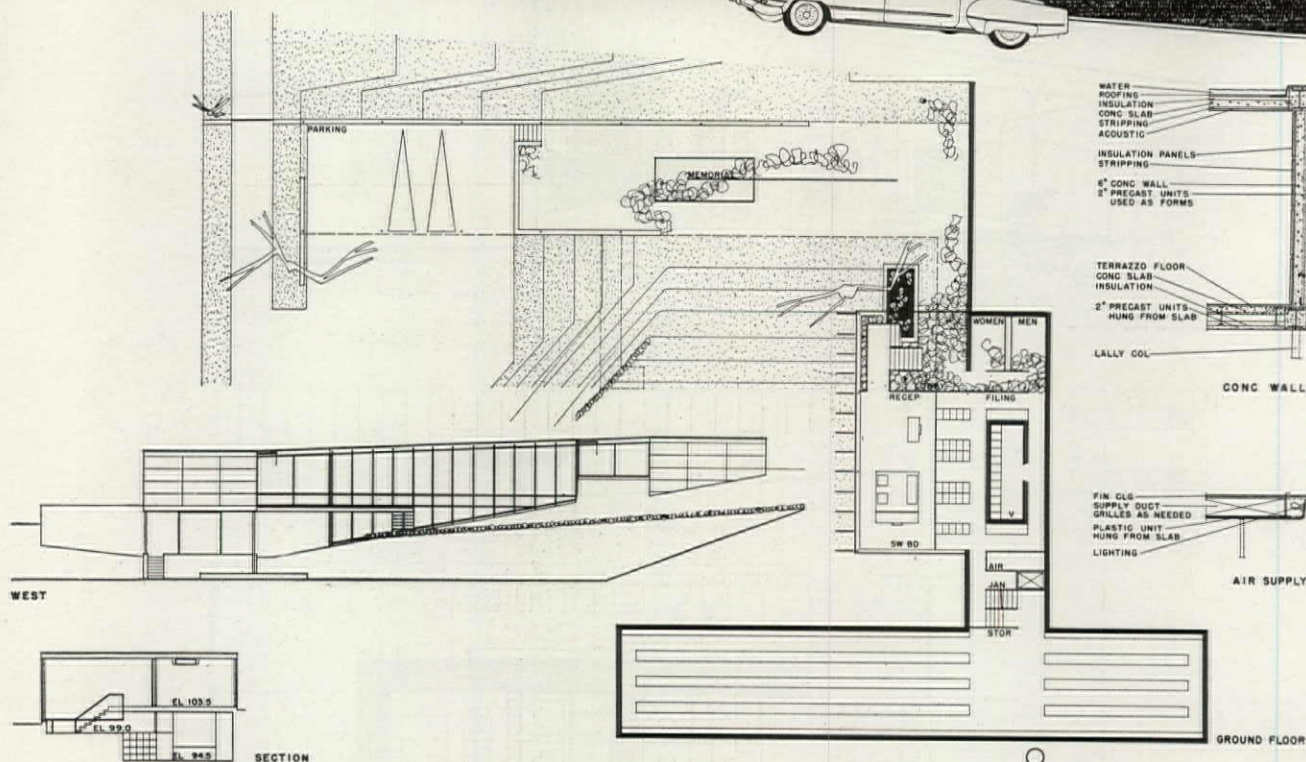
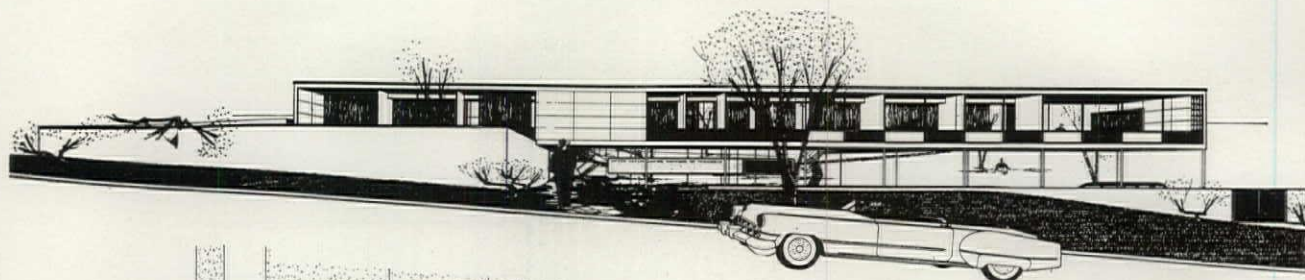
NEWTON E. GRIFFITH, DESIGNER, CAMBRIDGE, MASSACHUSETTS
ROBERT B. CLOPTON, ARCHITECT, CAMBRIDGE, MASSACHUSETTS



PROGRESSIVE ARCHITECTURE UNITED STATES JUNIOR CHAMBER OF COMMERCE COMPETITION

Honorable Mention and Served Special Prize

DALE C. BYRD, EL RENO, OKLAHOMA; WILLIAM N. BREGER AND STANLEY R. SALZMAN, NEW YORK, DESIGNERS
WILLIAM N. BREGER AND STANLEY R. SALZMAN, ARCHITECTS, NEW YORK



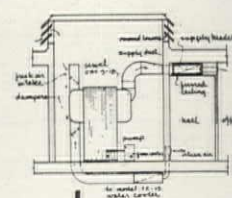
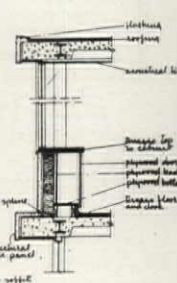
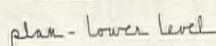
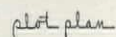
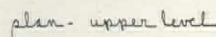
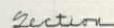
UNITED STATES JUNIOR CHAMBER OF COMMERCE ... COMPETITION 258

Honorable Mention and Trinity White Special Prize

RONALD GOURLEY, DESIGNER, BOSTON, MASSACHUSETTS
KENNEDY & SMITH, ARCHITECTS, BOSTON, MASSACHUSETTS



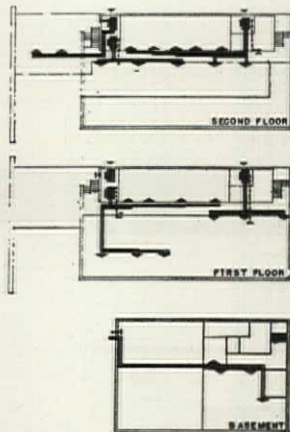
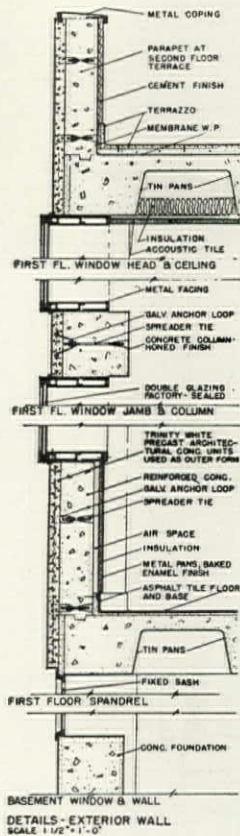
West elevation



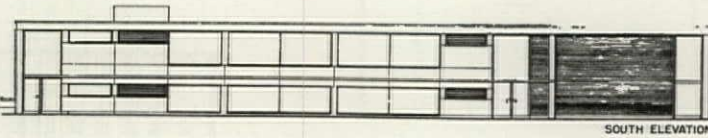
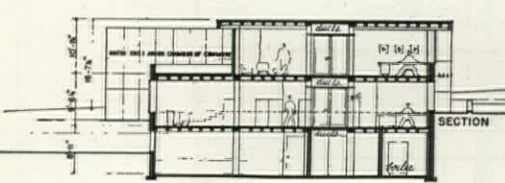
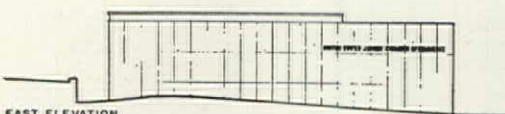
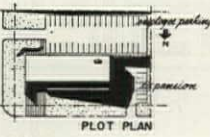
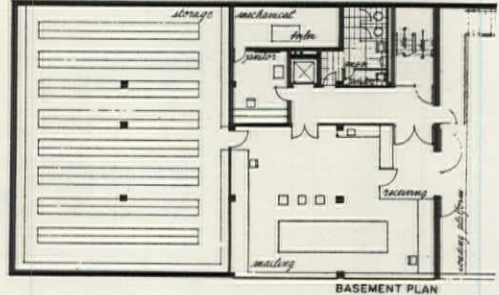
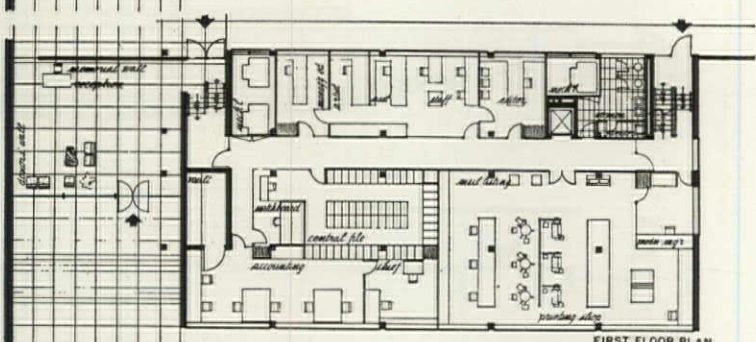
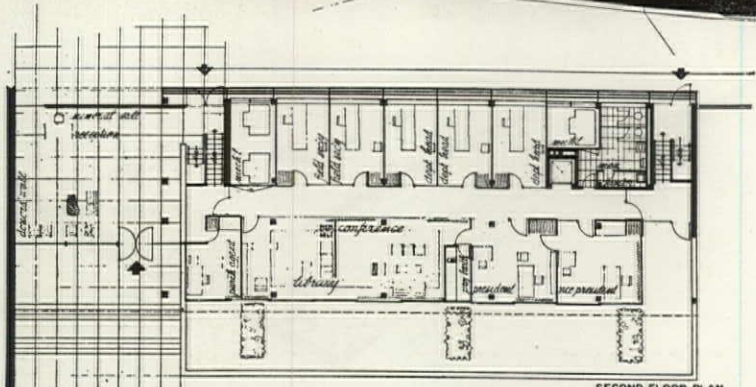
48.

PAUL CANIN, DESIGNER, NEW YORK
HUSON JACKSON, ARCHITECT, NEW YORK

VIEW FROM NORTHWEST



SERVEL ALL-YEAR AIR-CONDITIONING SYSTEM			
EXPANSION			
LOBBY A	32'-2 1/2" x 16'-2 1/2"	14098	
B	37'-10 1/2" x 16'-2 1/2"	2793	
2ND FL. C	96'-37" x 10'-12"	38888	
D	12'-10 1/2" x 10'-12"	811	
1ST FL. E	96'-37" x 9'-4"	4881	
F	8' x 8' x 3-7"	209	
BASEMENT G	78'-5 1/2" x 89'-2"	28871	
CUBAGE		138188	

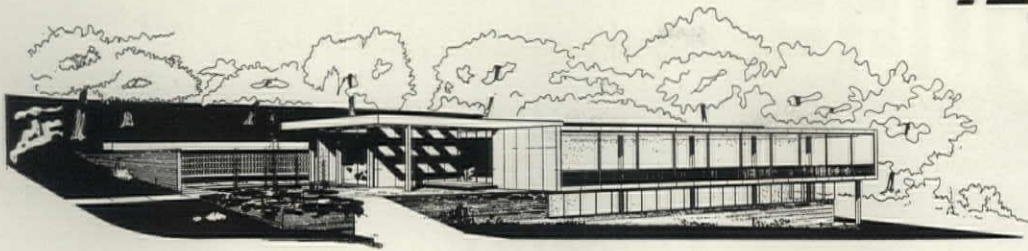


PROGRESSIVE ARCHITECTURE - UNITED STATES JUNIOR CHAMBER OF COMMERCE COMPETITION

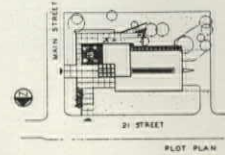
Honorable Mention, Servel and Trinity White Special Prizes
J. STANLEY SHARP OF KETCHUM, GINÁ & SHARP, ARCHITECTS, NEW YORK

OTHER HONORABLE MENTIONS

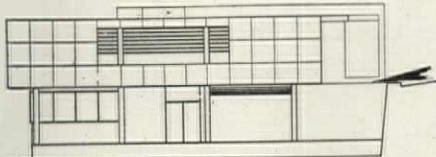
Others awarded Honorable Mention in the Competition were: Peter Blake, Designer, New York, also associated with Huson Jackson, Architect, New York (two awards); Wang Chiu-Hwa, Designer, School of Architecture, Columbia University, New York, also a pupil of Professor Goodman; Julio Cesar Volante, Designer, School of Architecture, Columbia University, New York, also a pupil of Professor Goodman; Seymour R. Joseph, Architect, New York; Stanley M. Sherman, Designer, and George Nemeny & A. W. Geller, Architects, New York; Gray Taylor, Designer, and Don



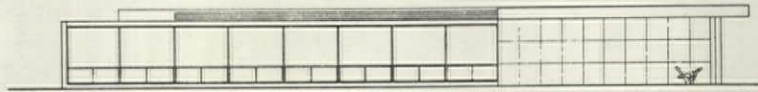
PERSPECTIVE



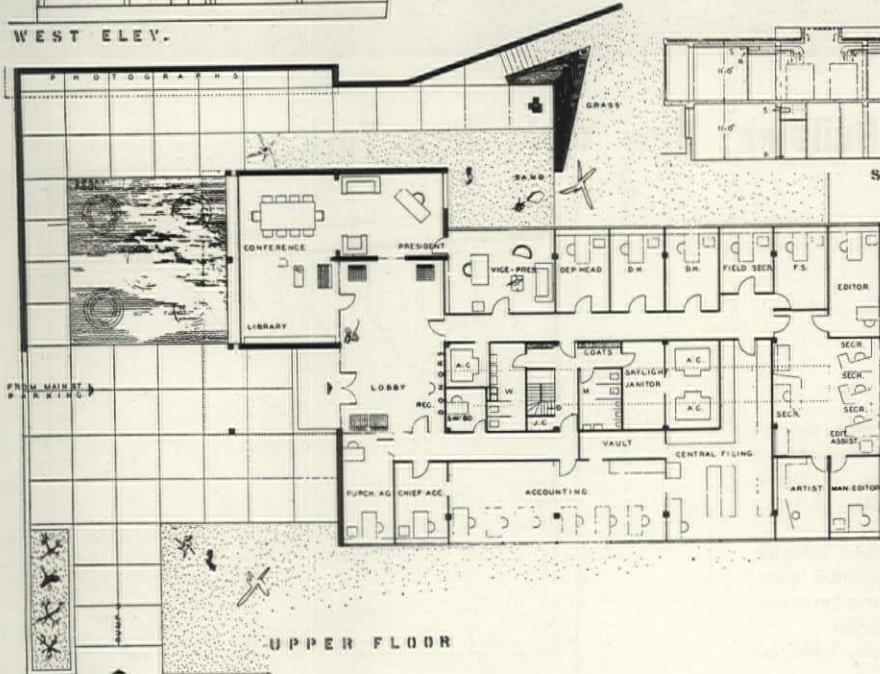
PLOT PLAN



WEST ELEV.

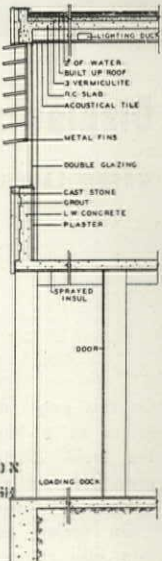


SOUTH ELEV.

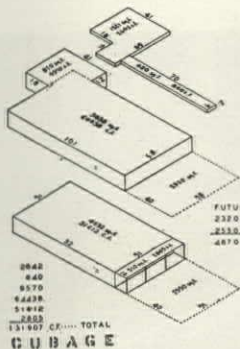


UPPER FLOOR

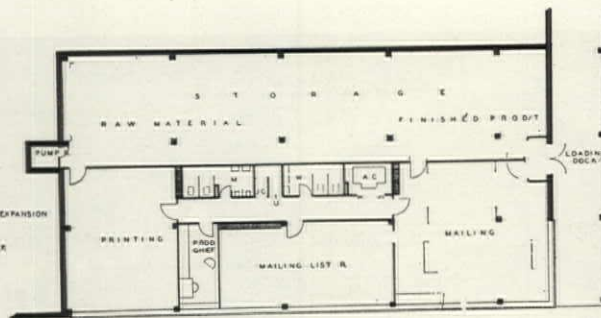
SECTION



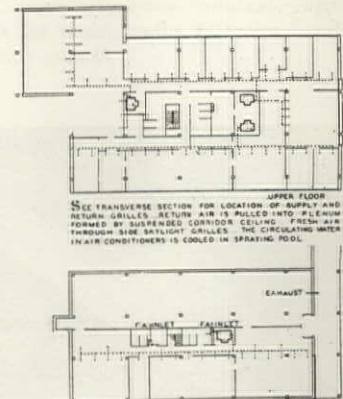
SECTION
THROUGH
WEST
WALL



FUTURE EXPANSION
2320
2550
4870 SQ. FT.
131,907 CU. FT. TOTAL
CUBAGE



LOWER FLOOR

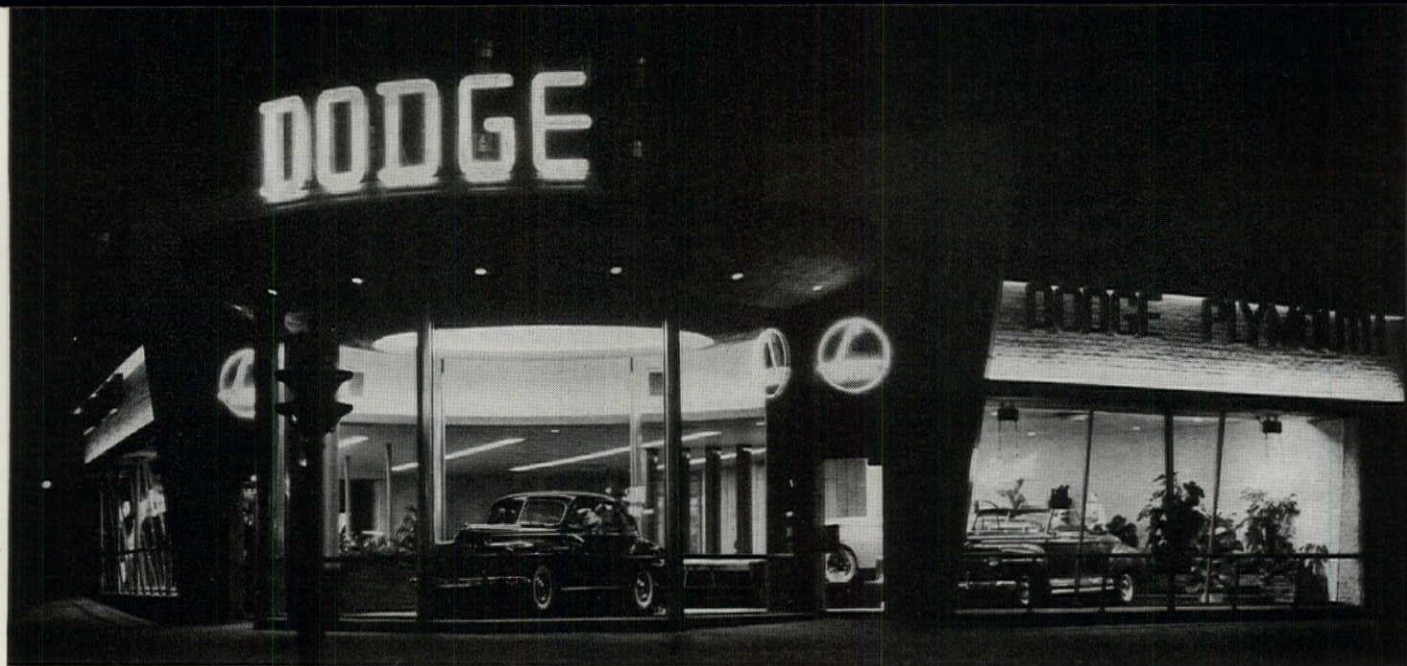


AIR COND'G LAYOUT

Honorable Mention and Servel Special Prize

YANI V. TRIANDAFILLIDIS, DESIGNER, SCHOOL OF ARCHITECTURE, COLUMBIA UNIVERSITY, NEW YORK
PERCIVAL GOODMAN, ARCHITECT AND PROFESSOR OF DESIGN

Reiman, Gray Taylor, and George Clark, Architects, New York; Lien Ching Chen, Designer, and Charles Burchard, Architect, Harvard University, Cambridge, Massachusetts; Ralph Rapson, Architect, Massachusetts Institute of Technology, Cambridge, Massachusetts; Gyo Obata, Architect, Chicago, Illinois; Walter A. Netsch, Jr., Architect, of Burleigh, Adams, Netsch & Dinkeloo, Architects, Chicago, Illinois; Donald Olsen & Bernard Sabaroff, Architects, San Francisco, California; and Ramey, Himes & Buchner, Architects, Wichita, Kansas.



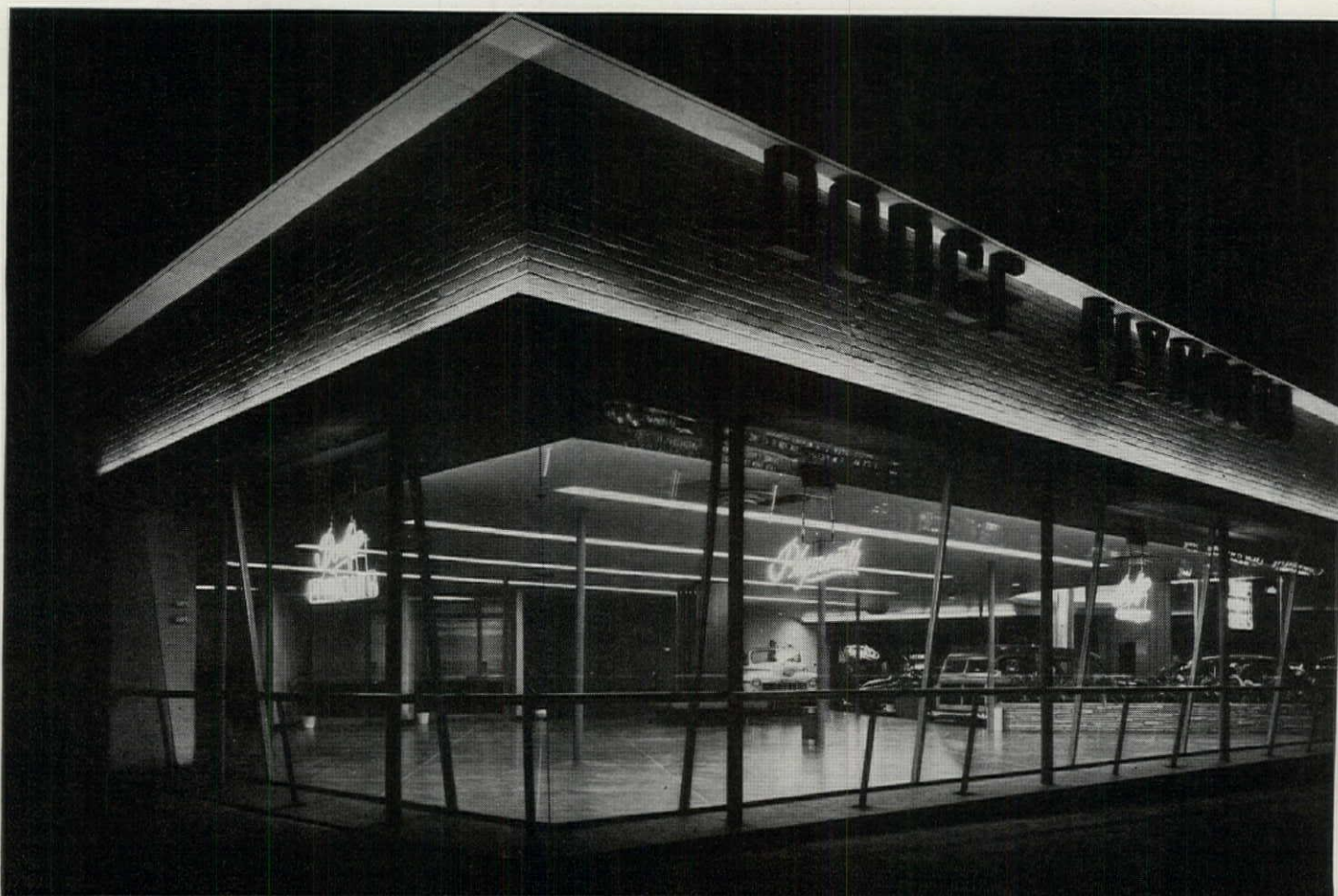
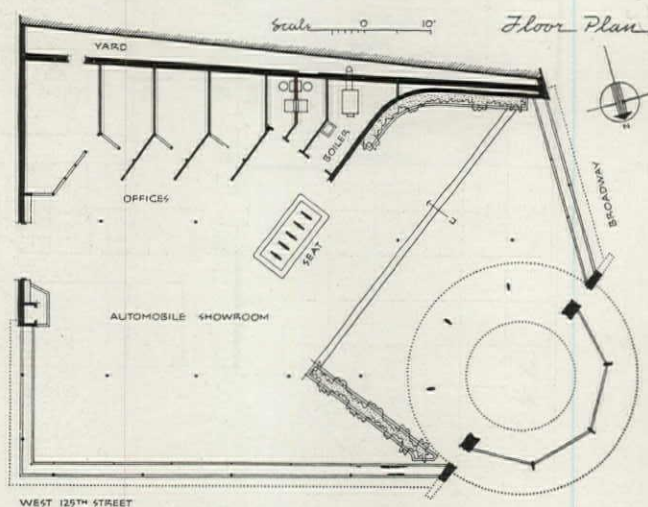
Display and Sales Building: New York, New York

MORRIS LAPIDUS, ARCHITECT

On this page: above—the corner rotunda element serves as a huge, attention-getting spotlight on the main display; below—continuous, in-sloping glass side walls minimize the distinction between outdoors and indoors.

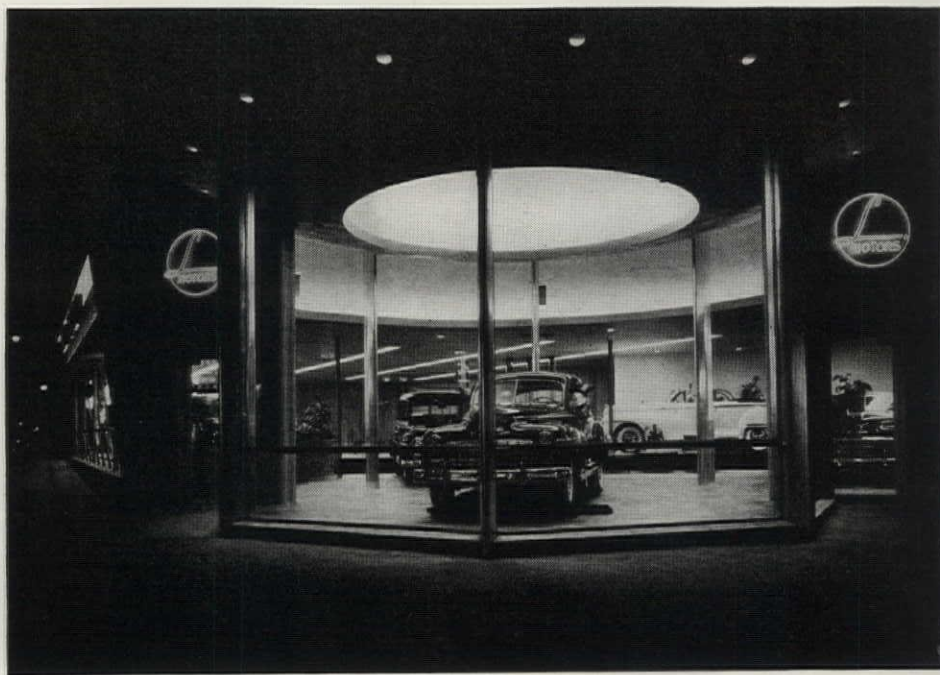
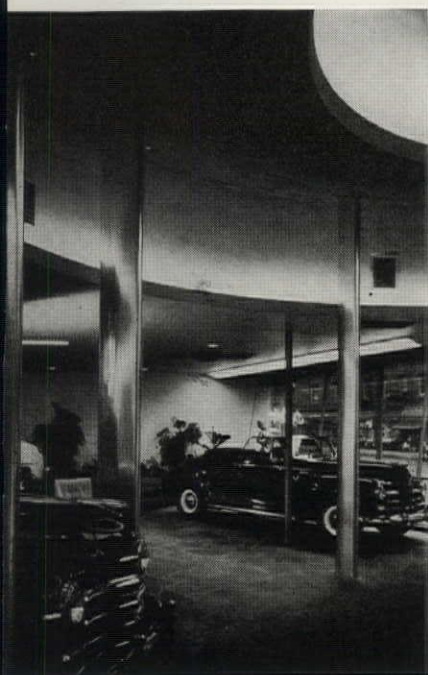
On facing page: left—detail within rotunda; 5-in. dally columns are covered with stainless steel; right—customer entrances pierce terra-cotta-surfaced pylons at either side of the rotunda.

Photos: Gottscho-Schleisner

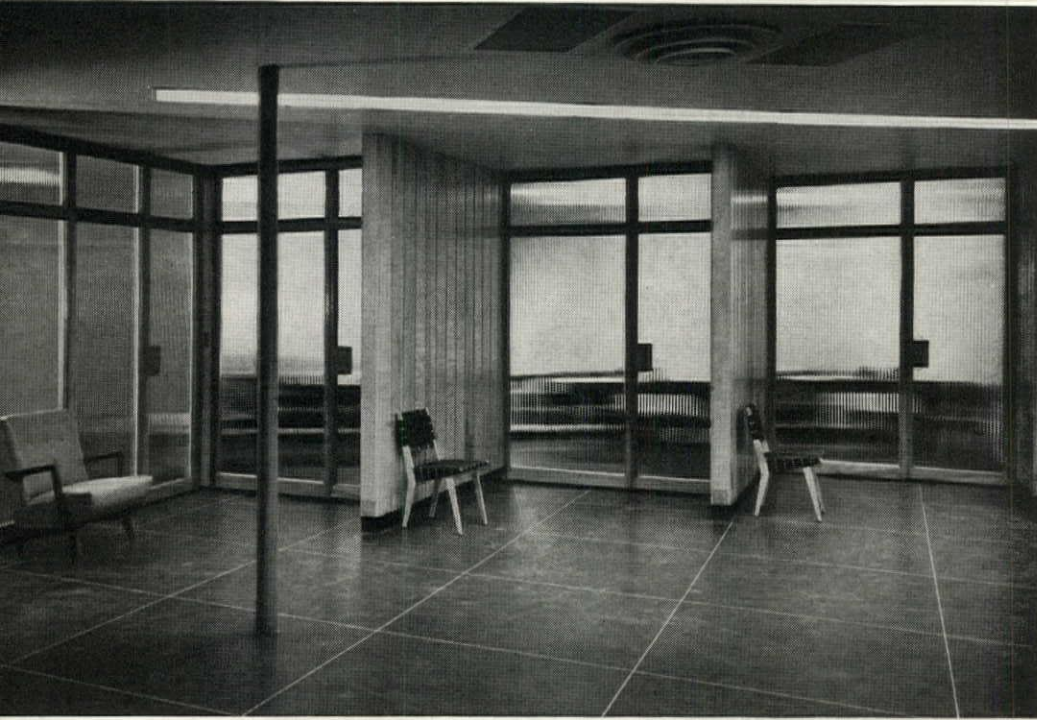




Morris Lapidus: New York University; B.S. Arch., Columbia U. Fifteen years with a firm specializing in designing and building stores throughout the country. Own practice established, 1943, specializing in stores, offices, showrooms, and factories. Architect of stores ranging in cost from \$5000 to \$3,000,000.



- program:** To convert an existing taxpayer, that housed several small stores, into an appropriate and eye-catching environment for display and sale of automobiles.
- site:** A corner on upper Broadway, diagonally across from a dazzling movie house with which it has to compete for attention. Much traffic in both directions.
- solution:** Essentially a dramatic show window for very large-scale merchandise. Continuous in-sloping window walls (to minimize sky reflections) on both street-front walls; steel pipe guard rail outside to accommodate window shoppers (see Selected Detail, page 97); impressive rotunda and pylon treatment at the corner frankly designed to lure the eye of the passing motorist and help draw attention away from the flashing signs of the movie theater; display floor arranged on two levels; conscious use on the interior of materials and effects usually associated with the outdoors—brick, flagstone, wood siding, planting beds, etc.—in an effort to create a stimulating environment for the merchandise displayed. As the architect remarks: "It seems to me completely wrong to design for automobiles a showroom that looks like a salon or a night club."



MATERIALS AND METHODS

CONSTRUCTION: Walls: masonry. Floors: concrete surfaced with terrazzo or flagstone. Roof: built-up, tar-filled roofing over wood and steel framing. Wall surfaces: exterior—brick, terra cotta, glass; interior—brick, stone, birch, pine, plaster. Glass:

plate-glass show windows; tempered, plate-glass entrance doors; patterned glass partition panels.

EQUIPMENT: Heating and air conditioning: complete year-round system; automatic controls. Lighting: both incandescent and fluorescent.

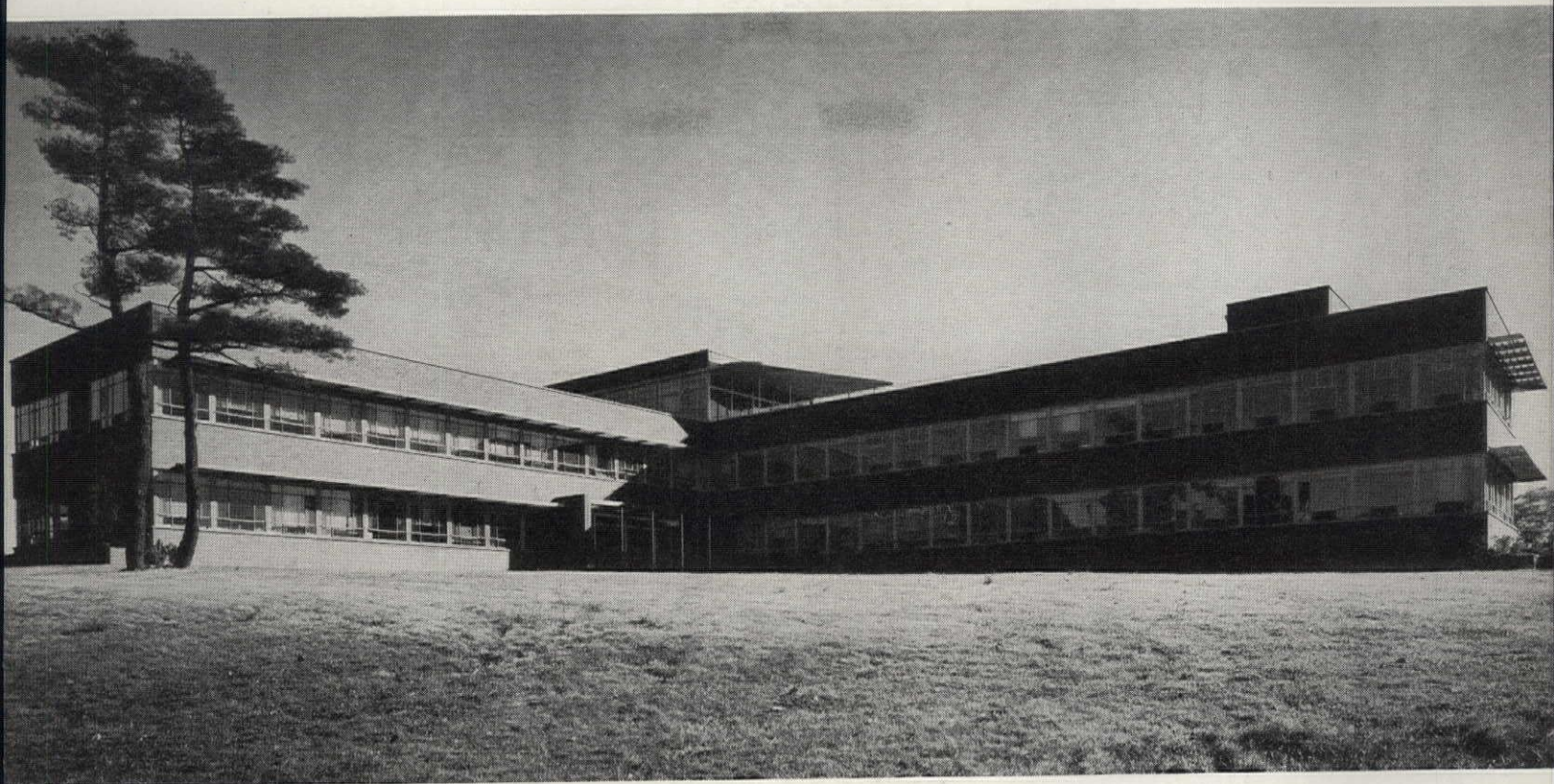


Top: board-and-batten wing walls separate the patterned-glass partitions of the four sales "closing rooms" in the rear corner.

Above: five, wood-surfaced columns form the center of an upholstered seat for customers.

Bottom: the terrazzo-surfaced upper-level display space is two steps above the flagstoned entrance area.





Research Laboratory: New Providence, New Jersey

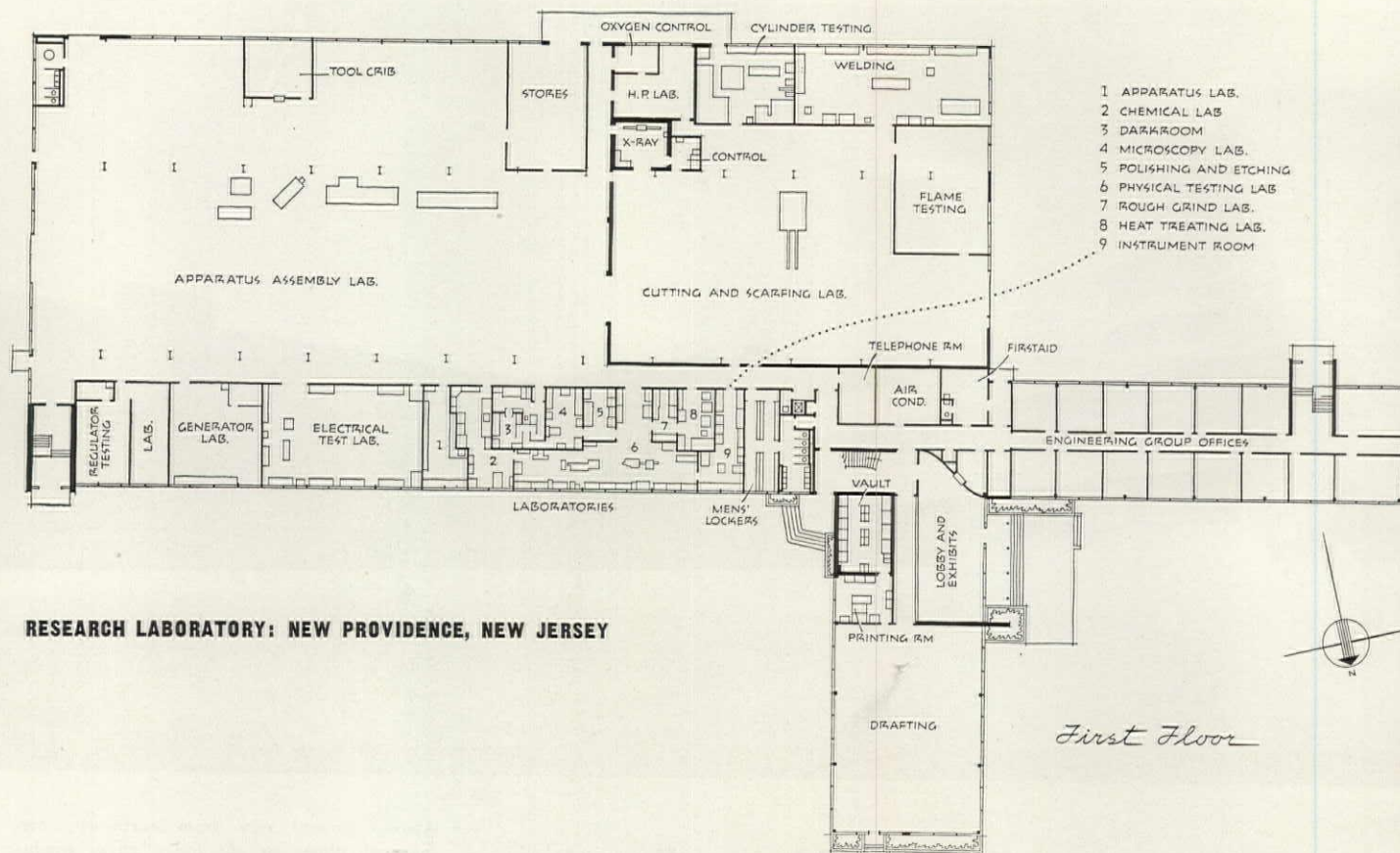
WIGTON-ABBOTT CORPORATION, ENGINEERS & CONTRACTORS
BOLTON, MARTIN & WHITE, CONSULTING ARCHITECTS

Above: general view from northwest; note louvered aluminum sunshades above window bands facing west. Researchers' offices occupy both floors of right-hand wing; ground floor of left-hand wing contains entrance and drafting room; upstairs are the administrative offices.

Below: view from southeast; the two-story area houses the big machine shop, apparatus-assembly, and cutting and scarfing laboratories; service garage, foreground.

Photos: Cortlandt V. D. Hubbard

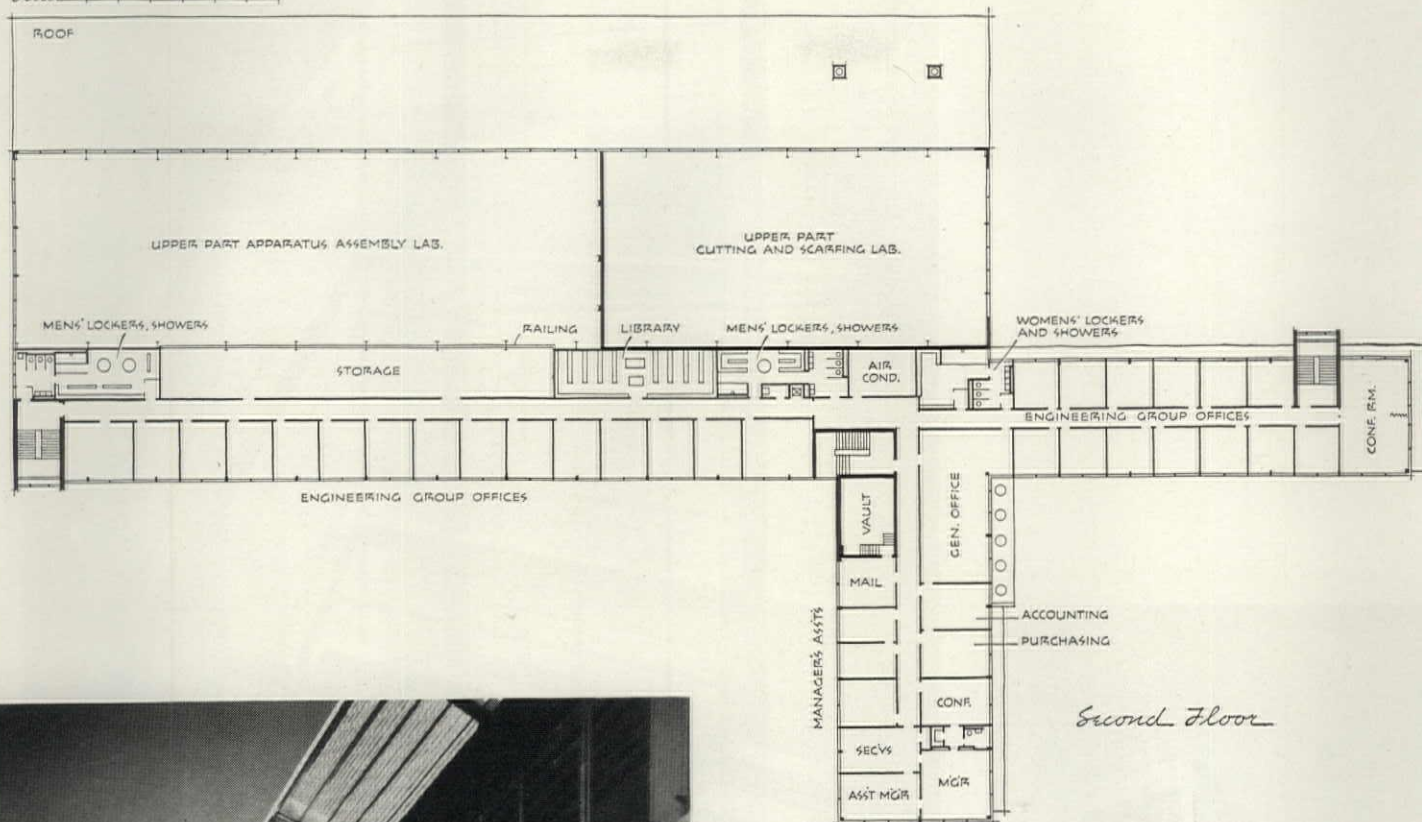




RESEARCH LABORATORY: NEW PROVIDENCE, NEW JERSEY

- program:** A research laboratory for Air Reduction Sales Co., Inc., for research and for development of processes and apparatus for using industrial gases and the electric arc, especially in the cutting, welding, and treating of metals. Personnel to consist of approximately 150 engineers, metallurgists, physicists, chemists, and laboratory technicians.
- site:** Heavily wooded hilltop in the New Jersey countryside.
- solution:** A two-story scheme, with wings housing offices for various activities (both research and business) arranged in an L-shaped block at the northeast corner of the two-story laboratory-shop unit; a partial third floor consists of the cafeteria and a roof terrace. Offices and small labs are concentrated along north side of building, both for quick intercommunication and for ready access to the machine shop and to cutting-and-scarfing and apparatus-assembly laboratories at the rear. Movable steel partitioning provides maximum flexibility in arrangement of interior working space. Banks of process pipe lines (oxygen, acetylene, nitrogen, and other industrial gases) serve both the small laboratories and the large assembly and lab block, through numerous conveniently placed "stations." The concrete platform on the south side of the assembly laboratory accommodates special trailers that carry 20-foot-long tubes containing the gases used in the laboratories. Flexible pipes connect the tubes to the process-piping system.

Scale 0 50



Entrance to west-facing main lobby and exhibit room is sheltered by the canopy shown in the photograph above. Above the window bands that light the offices is a continuous louvered, aluminum sunshade. Angle of the fins is set for total exclusion of sun on June 21.

MATERIALS AND METHODS

CONSTRUCTION: **Frame:** welded, structural steel. **Walls:** brick, with cast-stone trim; interior surfaces: plaster on furring tile (offices and laboratories); brick (shop area). **Floors:** concrete surfaced with asphalt tile. **Roof:** 15-yr. bonded built-up roofing over gypsum plank. **Fenestration:** steel sash; louvered aluminum sunshades above office windows on west and south. **Insulation:** acoustical—tile; thermal— $\frac{1}{2}$ " fiberboard. **Partitions:** flush steel. **Doors:** hollow metal. **EQUIPMENT:** **Heating:** central, forced warm-air system (offices); unit heaters (shop). Exhaust fans. **Lighting:** fluorescent troffers. **Hardware:** bronze.



Left and also above: detail of stairwell in the south wall of the block containing offices for researchers and engineering groups.
Below: view showing relation of stairwell block to the large laboratory unit.



RESEARCH LABORATORY: NEW PROVIDENCE, NEW JERSEY



Bolton, Martin & White—consulting architects on the job with Wigton-Abbott Corporation, Engineers and Contractors.

Earle W. Bolton, Jr.: Cornell U.; office manager, Howe & Lescaze; Coast Guard Reserve during war.

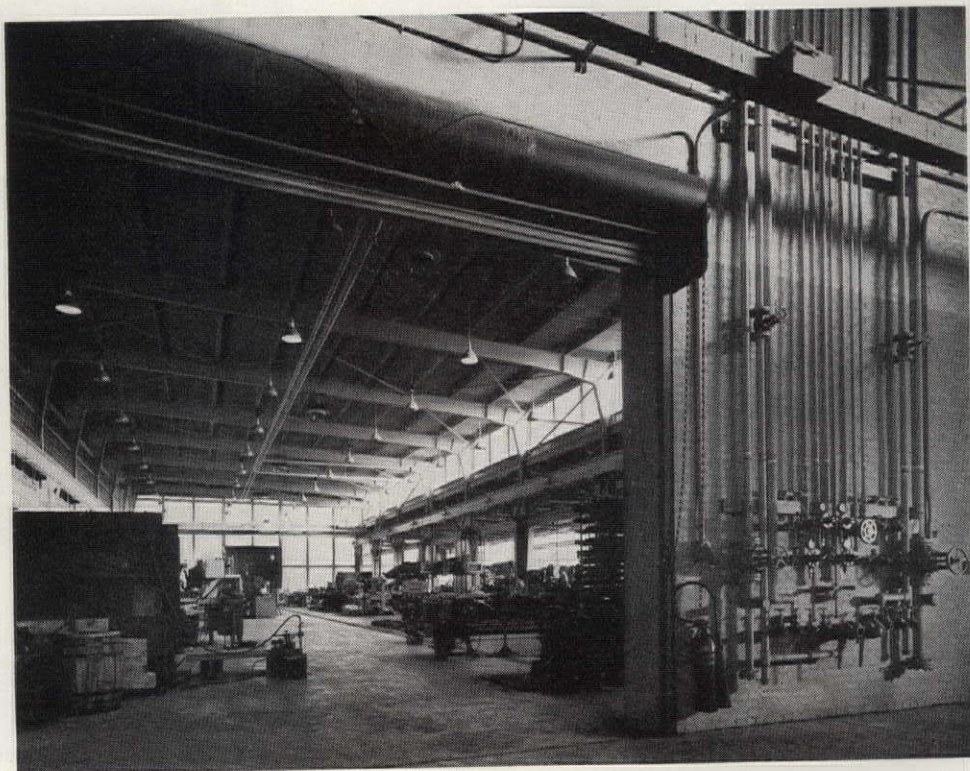
Briton Martin: Yale U.; U. of Penn.; trained in office of Edmund B. Gilchrist; captain, Air Forces, during war.

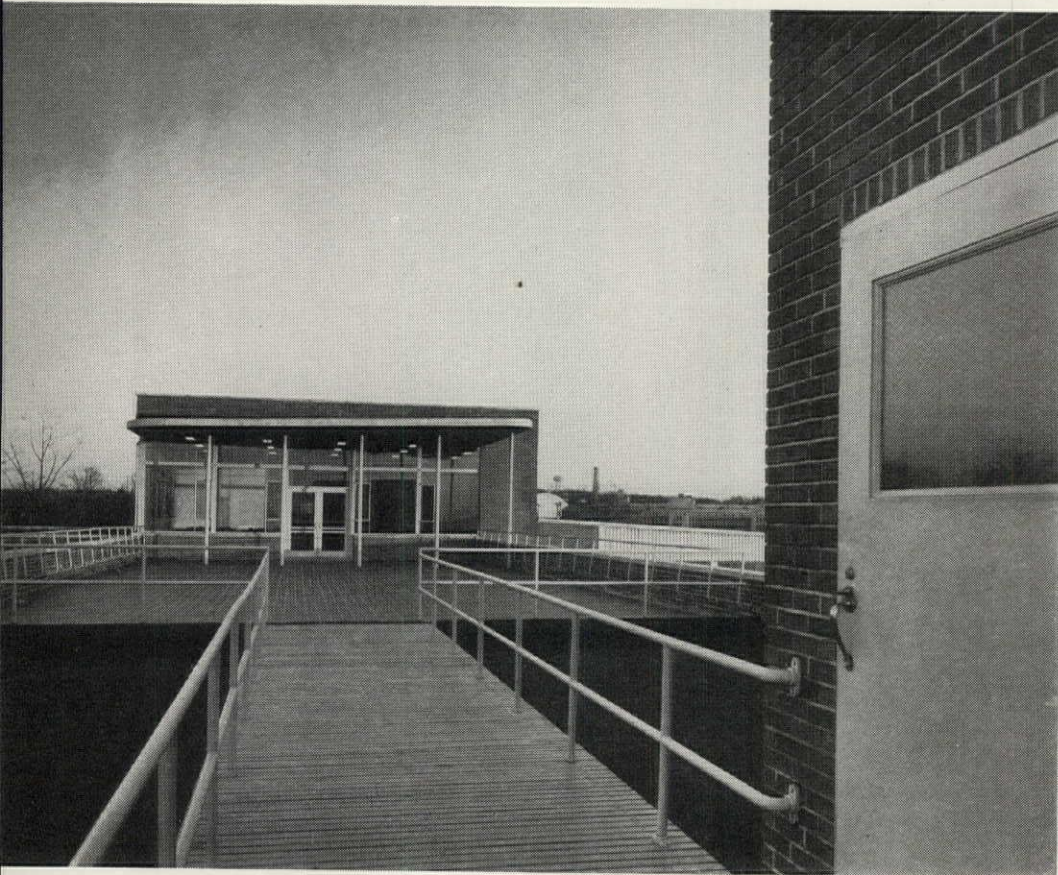
Theo B. White: U. of Penna.; trained in office of Paul P. Cret; major, Corps of Engineers, during war.



Above: Physical Testing Laboratory, on north wall of ground floor.

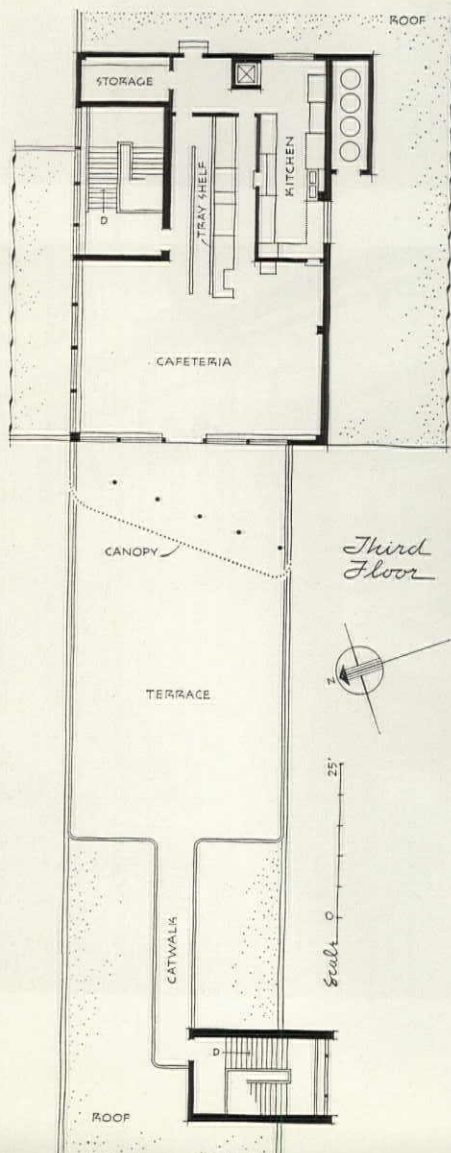
Right: looking from cutting-and-scarfing laboratory (note process-piping station on wall at right) through to apparatus-assembly laboratory and machine-shop area.





The cafeteria and a roof terrace make up the partial third-floor area. Left: looking toward cafeteria along catwalk from stairwell on south wall.

Below: the windowed cafeteria commands a broad view of valley and mountains. Selected Detail of roof-terrace canopy, page 95.



RESEARCH LABORATORY: NEW PROVIDENCE, NEW JERSEY



How Does An Architect Get Jobs?

BY THOMAS H. CREIGHTON

H. H. Richardson is reputed to have told a young architect that there were three things he should know in order to be successful. One was how to get a job; the second was how to get a job; the third was how to get a job. We present herewith the results of a survey made among a number of successful architects from various parts of the country, to determine how they get jobs. They all do good work and seem able to keep it rolling in. Some of them are best known for large commercial or institutional buildings, some for residential work and smaller commercial work. Some have been established for a long while; some have begun their practice fairly recently. They all pass on to you, anonymously, their experiences in the most effective way to bring the client to the door.

There are four principal ways of getting jobs. Voting placed them in this order:

1. Clients who come because of work already done.
2. Social contacts and community activities.
3. Solicitation.
4. Publicity and brochures.

It may be said, quite obviously, that a new firm must depend entirely on the second and third methods to gain work, while a firm that has established itself and has successfully completed commissions to point to can rely more on the first and fourth means. In fact, one older firm depends entirely on its reputation and on social contacts, never seeking publicity and never directly soliciting work. This is an exception, however; most of the architects who have been in business for a reasonably long time still depend largely on direct solicitation. In other words, one seldom reaches the point where it is possible to sit back and wait for work to flow in over the transom.

Social contacts, as one might suppose, loom important as a means of getting work. Opinions differ as to the effectiveness of community activities (club and civic association work, city planning interest, etc.), with general agreement that this is a desirable professional activity irrespective of its result in gaining commissions. To quote one man: "No matter how many or how few other contacts an architect may have, this channel is open to all who are willing to serve, and one doesn't have to beg the chance."

Direct solicitation of new business by the architect himself is one of the most effective single means of

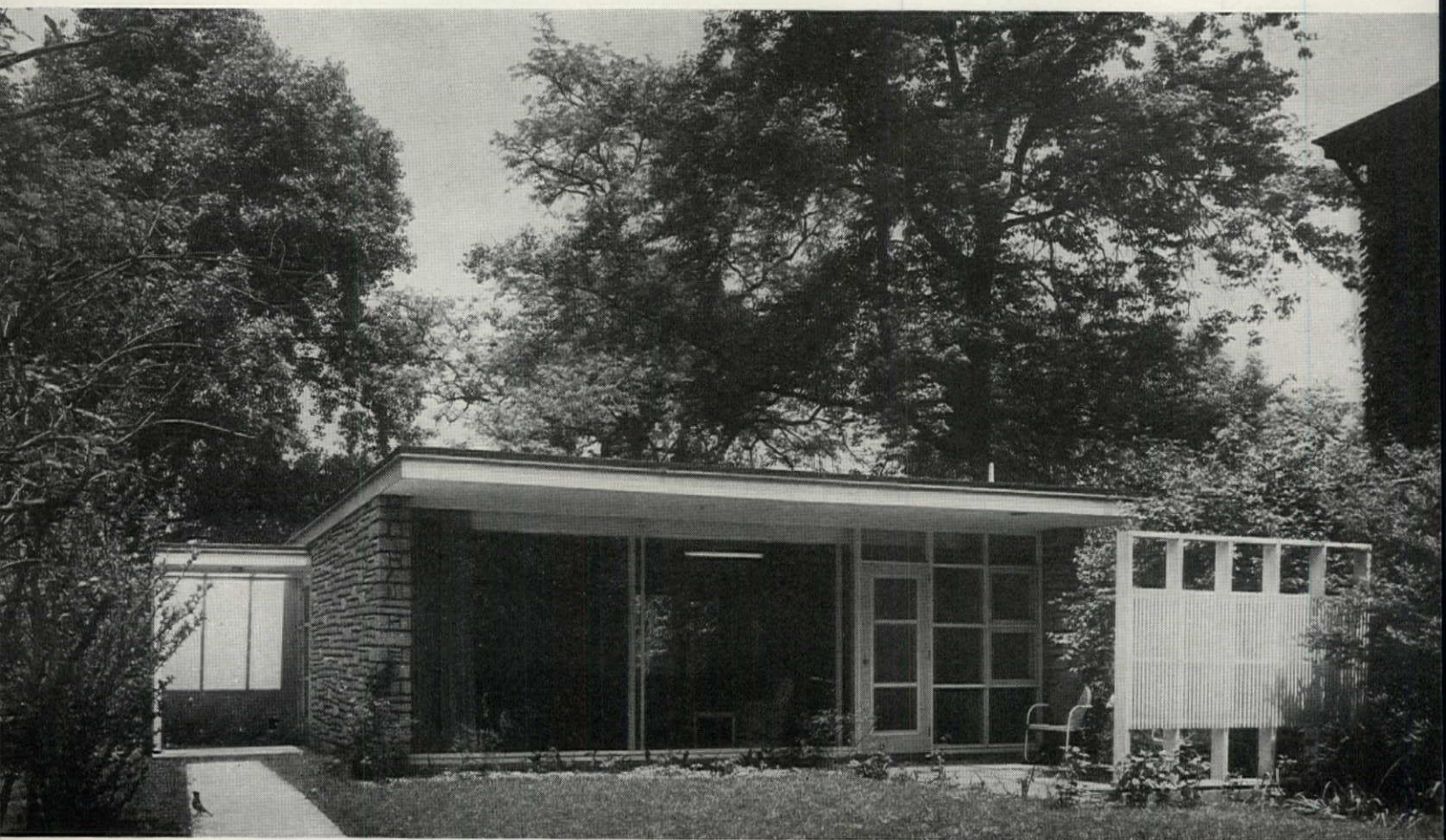
getting jobs, according to this study. Only a small minority use an agent—someone retained by the firm to solicit new business. (For a discussion of the legal and ethical aspects of that practice see *IT'S THE LAW* in August issue of *P/A*.) Several firms which have tried and dropped the use of a solicitor paid by salary or by commission spoke up strongly against it as being ineffective in the long run. Several others indicated that they were about to try it.

Newspaper and magazine publicity rated lowest among the four principal methods of getting business, but some firms find promotion of this sort extremely effective. Several complained that "the public doesn't subscribe to the architectural magazines," but several others pointed to effective use made of reprints from professional publications. One firm finds that articles by them and about their work in specialized magazines that reach client groups have been the most consistent source of new client contacts. The well-prepared brochure is an asset used most often in connection with direct solicitation.

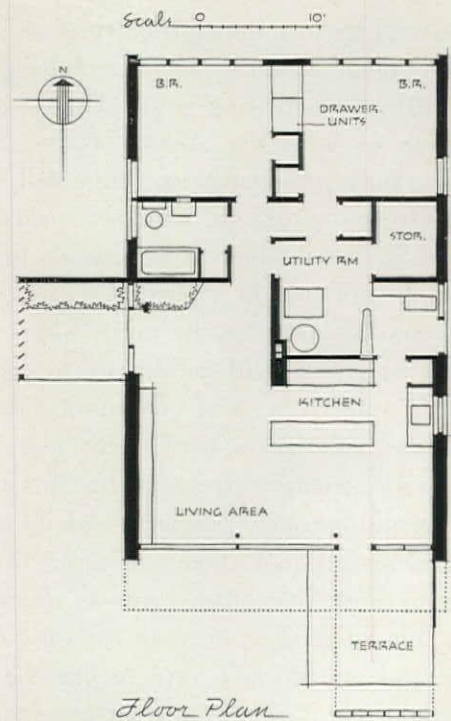
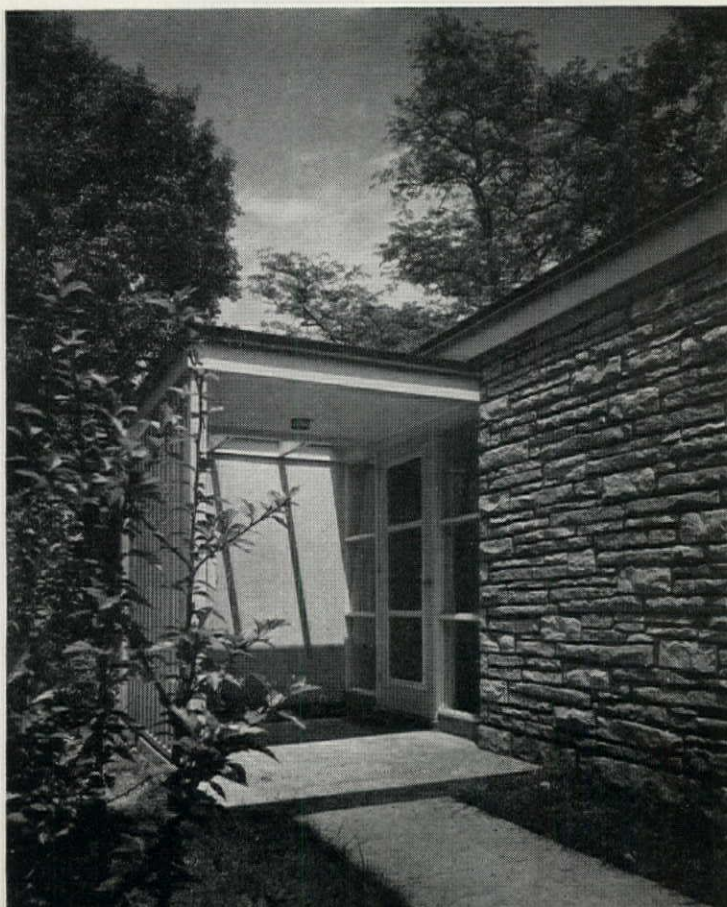
Several individual methods of gaining work were turned up in the survey. For example, one man has established a service for industrial plants in his area, consisting of an analysis of their production methods and the physical plant which houses them. He gets a fee for this, of course, and "whether buildings are needed at the time of the survey or not, it usually results in future work." This is comparable, in another field, to the studies of educational facilities which a number of architects are making for a separate fee. Any such long-range planning activity pays off in future work, and when an immediate separate fee is obtained for it, it pays double.

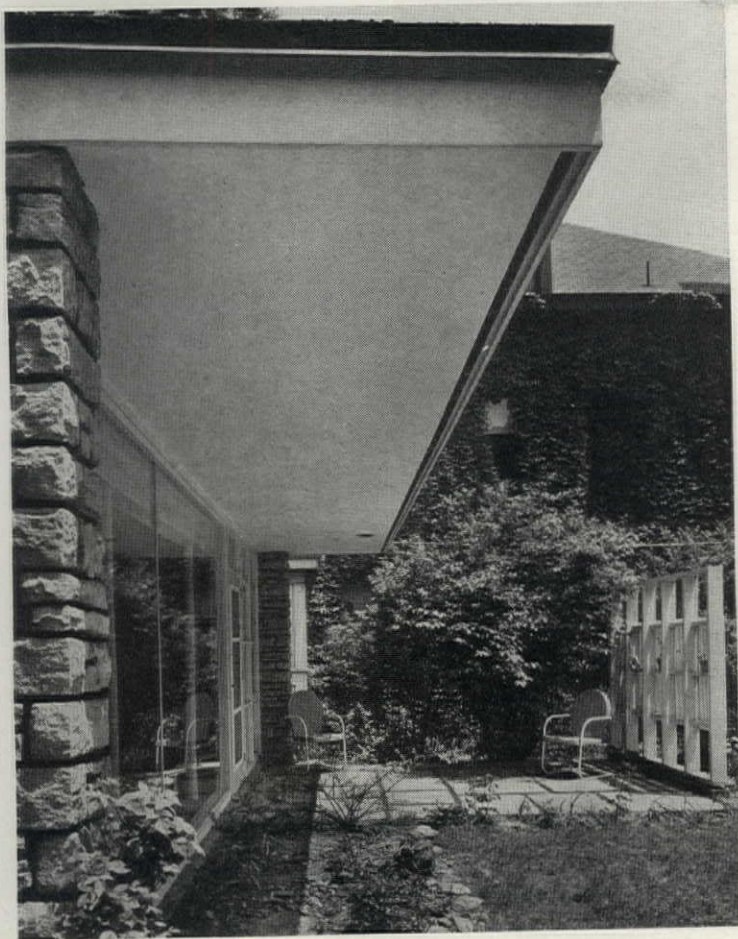
A tabulated breakdown of the survey results follows. Numbers after the methods indicate cumulative preferential voting among those questioned, based on their own experiences.

Recommendations From Old Clients	1
Repeat Clients	2
New Clients Who Have Seen Your Work	3
Social Contacts	4
Community Activities	6
Public Speaking	11
Direct Solicitation By Principal	5
Direct Solicitation By Agent	12
Newspaper Publicity	7
Magazine Publicity	8
Brochures	9
Other Means	10



House: Pittsburgh, Pennsylvania





J. A. Mitchell (below, left): B. Arch., Carnegie Inst. of Tech.; M. Science, Columbia U.

Dahlen K. Ritchey (right): B. Arch., Carnegie Inst. of Tech.; M. Arch., Harvard U. Practice, begun in 1938, interrupted by 3-year war period during which both partners were Naval officers. Office re-opened after war; practice has included government housing, commercial, recreational, institutional, and residential structures.



MITCHELL & RITCHEY, ARCHITECTS

- program:** Compact, easily maintained home for a schoolteacher and her brother. "Plenty of storage space," a requirement.
- site:** Deep, interior city lot 45 feet wide. The site is level for most of its depth and it is seven steps above the sidewalk.
- solution:** House organized within economical rectangle, placed well back on the lot. Side walls have minimum openings. Although south window wall of living-dining area faces street, sufficient privacy results from the following facts: the house is set back 55 feet from the street; the site is above the street level; and a well-developed hedge occurs near the front of the lot. Privacy for outdoor areas is provided by means of louvered wood screens—one at the entrance shelter, the other in front of the small flagged terrace outside the dining end of the main room. Placement of entrance door on side of house reduces hall space to a minimum. A free-standing storage-wall-folding-furniture (dining table) unit separates the living-room space from the kitchen-utility room (See Selected Detail, page 99). The generous provision of closets and a separate storage room are other notable features of the plan.



HOUSE: PITTSBURGH, PENNSYLVANIA



MATERIALS AND METHODS

CONSTRUCTION: Walls: wood frame; stone; brick veneer; interior surfaces: plaster, stone, wood. Floors: concrete, asphalt tile. Roof: built-up roofing over frame. **Fenestration:** double-hung, projection-type sash; plate and 1/8" glass. **Insulation:** asphalt-impregnated, wood-fiber blanket. **Partitions:** frame.

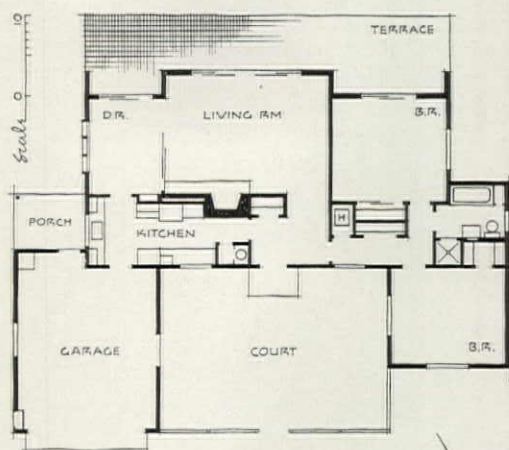
EQUIPMENT: Heating: Radiant-type system; steel pipe. Lighting: recessed fixtures. Kitchen equipment: all electric.



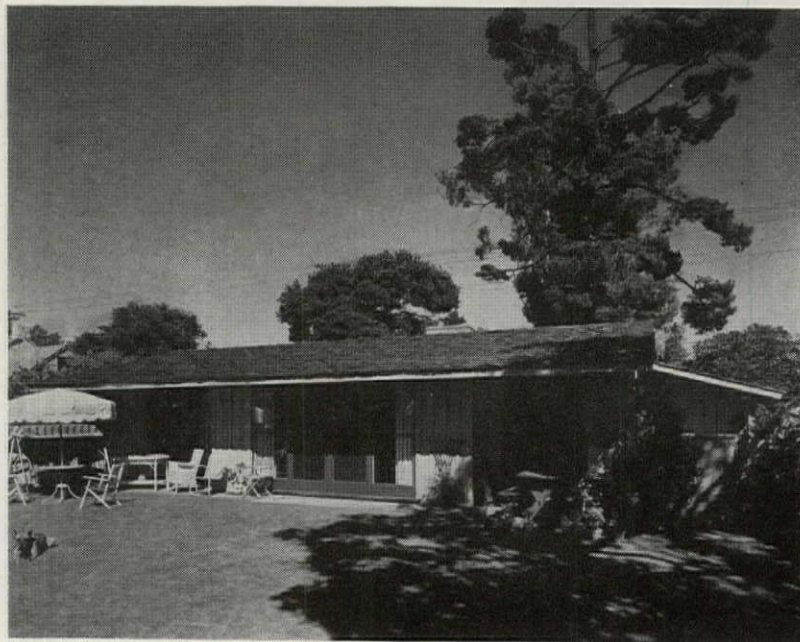
Photos across page: top—looking from entrance toward south window wall; bottom—living-dining room, with mirrored, storage-furniture unit at right.

This page: left—view toward dining end of living room; right—compact kitchen, set off from living room by multi-use case at right.

Photos: Richard Garrison



Floor Plan



House: Menlo Park, California

program: Suburban home for a middle-aged couple that specifically wanted "a ranch house."

site: Flat, rectangular lot, 85 feet on the street front (toward south-east) and 115 feet deep.

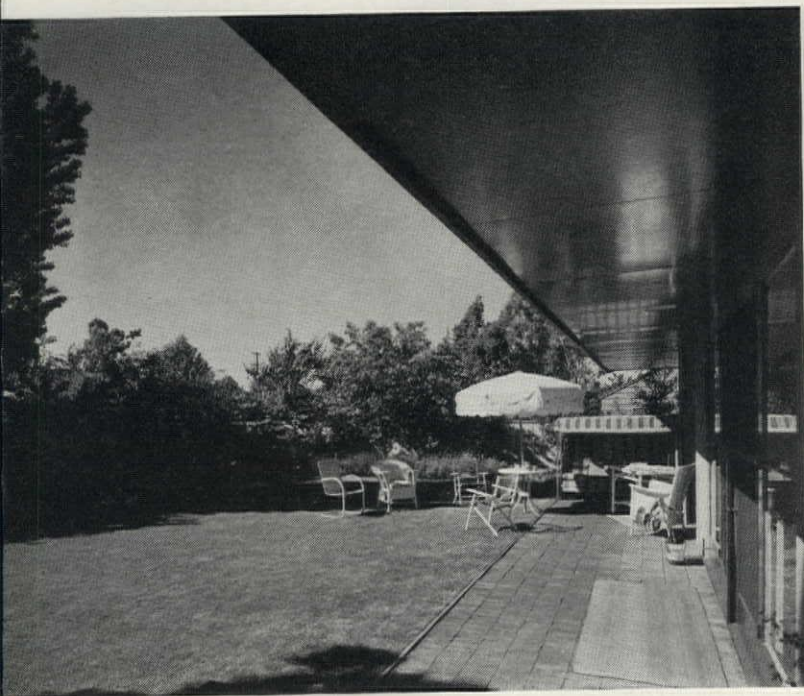
solution: Use of simple, rugged materials (boards and battens on the walls; cedar shakes, etc.) that are typical of the traditional ranch house. Well-organized plan, with passageway circulation to all rooms. Large, sliding, glazed doors—in living room, dining area, and owners' bedroom—that open the house to the private terrace and garden at the rear. The circulation scheme seems particularly notable, as in the ranch-house prototype one often must pass through main rooms—usually the living room—to reach different parts of the house, or else, where hall circulation is provided, it is excessive. In this house, both errors are avoided.



Photos across page: top—general view from street; bottom—garden front.

This page: above—living room looking toward terrace; at left—terrace showing deep roof overhang above northwestern window wall.

Photos: John H. Lohman

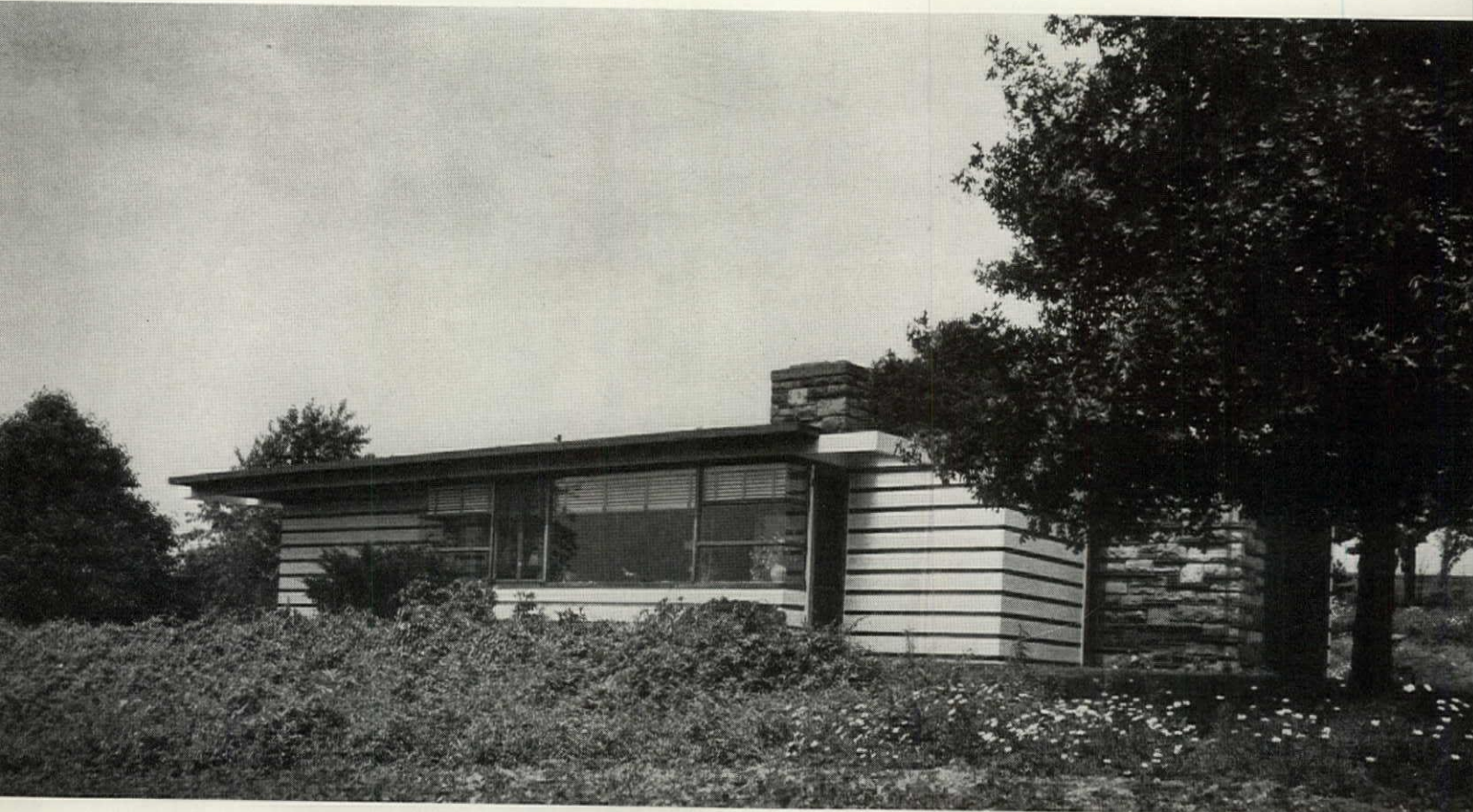


MATERIALS AND METHODS

CONSTRUCTION: Frame: fir. Walls: frame, surfaced outside with redwood boards (1 x 12) and battens (1 x 2); interior surfaces—stucco. Floors: 2 x 6 kiln dried, mill construction; oak surfaced. Roof: cedar shakes over frame.

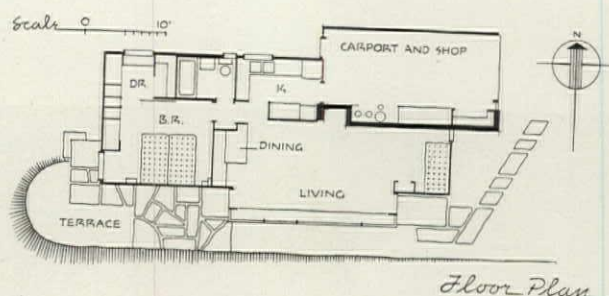
EQUIPMENT: Heating: forced warm-air system; thermostat. Piping: copper.

WILLIAM F. HEMPEL, ARCHITECT



House: Pittsburgh, Pennsylvania

RAYMOND VINER HALL, ARCHITECT

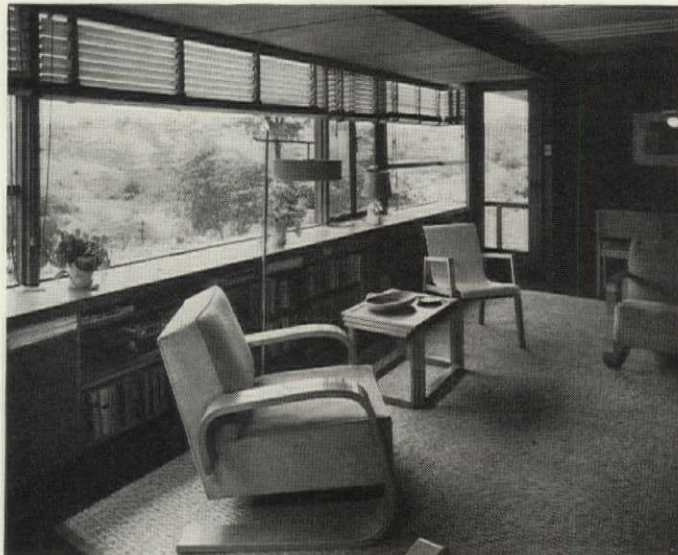


- program:** Modest home for a newly married couple. Guiding principles of the design were simplicity and economy, with a minimum of maintenance.
- site:** Spacious, gently rolling hillside, with a pleasant view of Pittsburgh's North Park.
- solution:** Enclosed space conceived as a two-zone area—one for conversation, reading, dining, etc., with compact cooking-laundry facilities at one side, partially set apart by open shelves and the fireplace; the other, for sleeping, with adjoining bath and dressing alcove. Emergency guest sleeping space is provided by screening one end of the living room. The architect comments: "This concept and planning approach assured a sense of continuity, unity, and comparative spaciousness . . . in a degree not usual in a small house."

MATERIALS AND METHODS

CONSTRUCTION: Walls: 2-in. splined pine planking, surfaced outside with alternating jointed cypress boards and redwood battens. Interior wall surfaces: 1/4" mahogany plywood. **Floors:** concrete slab, either stained and waxed or (in kitchen and bath) surfaced with linoleum. **Roof:** splined plank, mill construction, surfaced with tar and gravel. **Fenestration:** steel sash; double-strength and plate glass. Insulation: 1/2" fiberboard. **Doors:** flush, mahogany.

EQUIPMENT: **Heating:** radiant system, with copper coils in floor slab; oil-fired boiler; room thermostat to control circulator. **Lighting:** concealed, fluorescent.



Photos on facing page: top—general view from southeast; bottom—west end of living room, with built-in dining table and bench; glimpse into kitchen, right.

This page: top—the south window bay; below—the stone masonry of the fireplace wall continues on out along one whole side of the carport-shop.

Photos: Fred Gund



Choosing the Right Heating System

BY ROBERT H. EMERICK*

What is the cheapest heating system?

Cost studies, on a wide variety of jobs designed and handled by the writer during the past three years, indicate that warm-air heating, on the present market, requires a substantially smaller capital investment than either circulating hot-water or steam systems. For schools, churches, fire-stations, residences, and other structures examined in this study, the average cost ratios, assuming warm air to have a value of 1, were 1.5 for circulating water and 1.65 for steam.

While these ratios may be expected to vary with particular designs and with changing market conditions for material and labor, they have obvious value for every architect and engineer who must discuss costs with a client. Redesigning a system can take all the profit out of a job, and to do so is particularly undesirable after structural plans are drawn.

Chart 1 is presented as an aid in estimating the cost of a central heating system for several types of structures. Note the influence of layout and construction materials on the costs, as evidenced by the investment range for any one class of heating.

To help us with our predesign discussions of heating systems, suppose we consider the peculiar advantages of each. With a warm-air system,

for example, the freeing of floor space, and the adaptability of duct layouts to all-year conditioning are obvious. Not so obvious is its peculiar suitability to special conditions. Warm air under pressure from a fan, we know, can be directed downward with ease, and where floor space is precious, a heater in the attic literally can lift its load right off our worried minds.

Figure 1 illustrates a type of horizontal heater, originally developed for suspended installation, that fits admirably under the low rafters of a sloping roof. Since fire departments regard these high-set heating plants with definite favor, we are likely to see more of them as basementless houses increase in number.

Figure 2 shows the design of a warm-air system intended to hide all heating equipment in an historic synagogue. Main ducts are run under the floor, and the two stacks to the balcony are built into the walls.

Less favorable as a general rule is the consideration of warm-air heating, with the fan in a central position, for a group of buildings. The duct layout becomes bulky, lengthy, and involved—all undesirable features. An efficient air balance in such a system is all but impossible; other ways of heating will be simpler and better.

The basic advantages, limitations, and characteristics of the principle heating systems are discussed in this article. The author's comments and conclusions, presented in chart form, serve as a helpful reference for the architect selecting the most suitable system for a particular job.

We can also advise our clients that warm air is not often our best choice for old buildings. Usually, the need for structural changes tends to complicate the installation and run up the cost. Alternately, the sight of exposed ducts will also be objectionable.

The Hot Water Picture

Why do we use hot water? To say that our client likes it and wants it is not an adequate answer. In many circumstances, hot water is the ideal medium.

For example, suppose we are faced with the necessity of concealing all piping, and the structural design is such that horizontal runs must be laid flat. With these requirements, the small piping needed for hot water, the absence of insulation requirements except in outside walls, and the exemption from gravity drainage demands, make circulating hot water our most suitable selection.

Another advantage of hot water is its ability to support uniform temperatures. We have quite close control of the temperature in our radiators, and the heat storage in the water maintains heat emission during "off" periods of the firing equipment. Whereas with steam, hot water's major competitor, we are

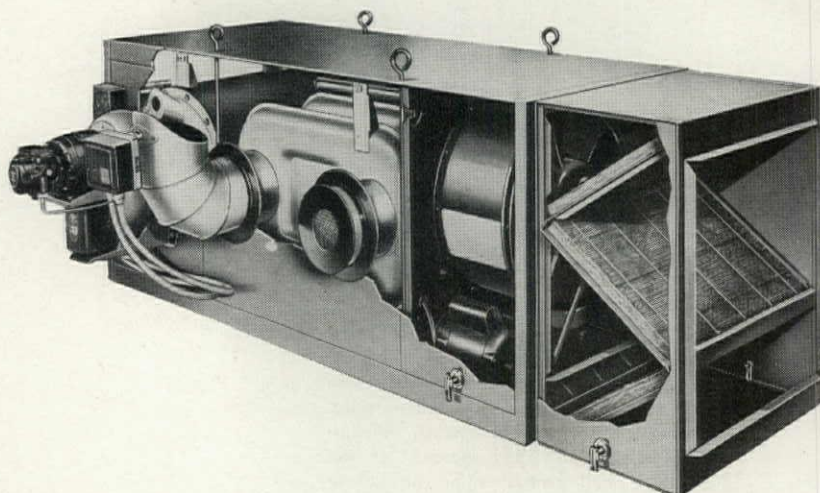


Figure 1. Horizontal type heater is suitable for installation under low rafters of a sloping roof.

* Consulting Mechanical Engineer, North Charleston, South Carolina

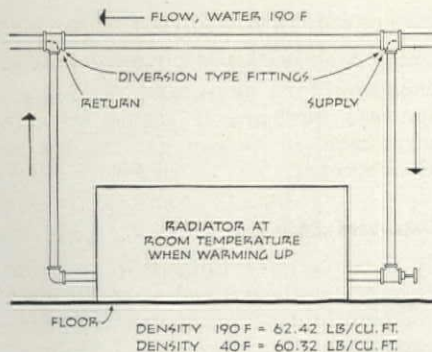


Figure 3.



Figure 4.

often conscious of the radiation cooling, when the furnace operates on an "off and on" schedule. We seldom perceive this change with hot water. Where control of temperatures within close limits is desirable, as in nurseries, hot water offers definite advantages.

From the standpoint of limitations, we must recognize that 1) hot-water radiation must provide more surface than steam due to its normally lower rate of heat emission per square foot; 2) a multiplicity of zones tends to produce a multiplicity of piping and pumps; and 3) friction and pipe sizes must be carefully considered or the system's balance will be faulty and the heating unsatisfactory.

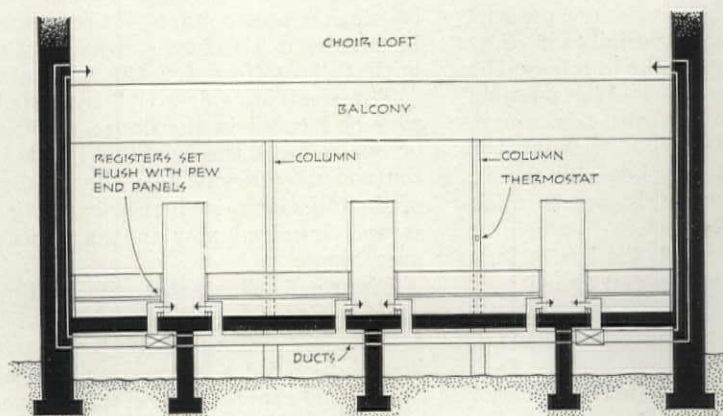
For the architect concerned with space, the added areas of hot-water radiation is not a serious problem, for the ratio of 195F water with an emission of 200 Btu. per square foot per hour, to steam with 240 Btu. emission, is only 1.2 to 1. Of course, with the obsolete gravity circulation systems that we prefer not to design for modern buildings, the ratio was much greater—1.6 to 1 being the accepted ratio. Generally, in modern design, the added area is readily acquired by increasing the height or number of tubes in the radiator.

Multiplicity of piping is of no im-

CHART 1: UNIT HEATING COSTS FOR ESTIMATING

building class	description	heating system	load per hour, btu.	investment per M. btu.
Residence	Frame, 1-story, 10 rooms	Mech. Air	138,000	\$ 9.78
Residence	Concrete block, 1-story, 5 rooms and bath	Mech. Air	82,000	12.13
Residence	Brick veneer, 2-story, 8 rooms, bath, and attic	Mech. Air	140,000	11.72
Residence	Frame, 3-story, 10 rooms, 2 baths	Circ. Water (Reversed Ret.)	200,000	18.00
Church House	Brick, plaster finish, 2-story, including auditorium	Circ. Water 2-zones, single pipe	300,000	12.80
Y.W.C.A. Group	3-brick and frame dormitories, from 2 to 4 stories, extended over a city block, with underground piping	Circ. Water 3-zones, reversed return design	800,000	11.27
School	Brick, 1-story and auditorium, shaped like letter F	Circ. Water 4-zones, reversed return	958,000	7.52
School	Brick, 3-story and auditorium, shaped like letter L	Circ. Water 3-zones, reversed return	824,000	16.61
School	Brick, 1-story, compact under one roof	Steam, 2-pipe	1,300,000	8.46
School Group	Brick, 1-story, 4 classroom wings, separate cafeteria, separate library bldgs. Cover a full city block	Steam, 2-pipe underground mains	1,100,000	13.64
School	Brick, 1-story, compact, one roof	Mech. Air	400,000	11.50
Synagogue	Solid brick, balcony	Mech. Air	300,000	11.67
Fire Station	Brick, 2-story, 3 trucks	Mech. Air	190,000	9.00

Figure 2. The warm-air system in this structure was designed to hide all heating equipment.



portance in a boiler room with plenty of space, but it can present problems of trench size and interference, if the distribution is extensive. In these circumstances, costs may approach those of steam systems. This trenching and interference factor was a strong agent in causing the writer to use steam for a large group of school buildings in Florida.

Another sometimes troublesome factor, for radiators below the level of the main, is the resistance to the starting of circulation. The reason for this becomes obvious if we look at Figure 3 and realize that we are trying to push cold, high density water *upward* and out of the radiator with hot, low density water moving *downward*. In short, we are challenging a law of nature. Dense fluids seek the bottom of a container, and lighter fluids the top.

The best way to handle this situation is to avoid it. If many radiators must be located below the main, some other type of heating should be considered. However, for the occasional low radiator, we can secure adequate results by inserting a mechanical contrivance in the main at the point of radiator take-off. This fitting is designed to force a predetermined quantity of hot water downward into the radiator.

Since these diversion fittings add to the cost of the job, contractors in a highly competitive market may tend to leave them out. To avoid this possibility and later grief, specifications should demand them.

What About Steam?

Where extensive distribution is concerned, steam is our number one choice. Generally, we can expect it to go anywhere, provided that there is enough pressure on the boiler. District steam companies have been making a living from this characteristic for years.

Steam also permits us to use the smallest sizes of heat-emitting equipment, such as radiators, convectors, and unit heaters.

Where large groups of persons congregate, and especially if they congregate in irregular numbers, the sharp "off and on" control possible with steam is of definite advantage. We can heat and cool without the complication of the heat lag as in a body of hot water. Steam is quick and very positive.

On the other hand, the limitations of steam tend to be rather critical. For example, adequate drainage of the mains, by gravity, is essential. To provide the $\frac{1}{4}$ -inch per 10 feet of slope of the steam main, and the $\frac{1}{2}$ -inch per 10 feet of slope for the

return, is sometimes difficult and costly. It is sometimes impossible.

Next, steam piping with its insulation presents a problem of physical bulk, not always accommodated with ease.

As a final item for thought, steam heating tends to be the most expensive method we can choose. This dollar factor grows under our very eyes in basementless houses, where return of the condensate to the boiler by gravity is impossible, and we must provide sumps, pumps, and perhaps a pipe trench under the floor.

Panel Heating

We have a choice of heating media for our panels: hot water, warm air, or electricity. All three have a common characteristic in that they are primarily applicable to new buildings only, and must be incorporated in the construction.

The effect on room occupants is largely the same. As floor temperatures must be limited to 85F, supplementary ceiling or wall panels are frequently necessary to overcome winter heat losses. Such panels tend to complicate the installation. Indeed, many designers lean to ceiling panels exclusively, to take advantage of the higher permissible temperatures.

Panel heating costs more to install than conventional radiation. There is a conviction that operating costs are lower because of the nature of radiant heat. This writer considers such beliefs unwarranted at the moment, however, due to the many variables involved in any given installation. For instance, rugs, drapes, and the placement of furniture, introduced after the system is in operation, may completely upset the operating economy. Heat rays will not pass around corners. Figure 4 shows a wall installation for a hot-water panel.

Operating figures for electric panels used in the Pacific Northwest states are quite reasonable. In Seattle, the owner of a five-room house with attic reports a winter average of \$13.75 per month for heating; a 1400-square-foot residence in northern California was heated with full comfort for \$20 a month.

The electric cables, well insulated, may be located in the floors, ceilings or walls, and the current input is controlled by thermostat. The number of installations is increasing, with several hundred now in the Seattle area alone.

Figure 5 illustrates the ceiling construction involved, if we heat with a warm-air ceiling panel. The basic idea is to build a warm-air chamber over each room wherein air movement is guided by metal baffles or

channel-forming partitions. At present, this system is being recommended for one- and two-story houses; however, it seems suitable anywhere, if we can get the air to the chamber.

Baseboard Radiation

It is sometimes difficult to provide enough baseboard radiation to meet the heat losses from rooms with large exposures. For example, if we have a room heat loss of 8000 Btu. per hour, we must place 16 feet or more of steam baseboard, and 20 feet if the medium is 195F hot water. Considering that wall area must be allotted to doors, closets, etc., the situation sometimes becomes critical.

Baseboard radiation definitely conserves space, and can be made to present a good appearance. It responds quickly to weather changes. It is not cheap to install. From an operating standpoint, circulating water temperatures should be kept below 200F in order to avoid the development of dust streaks on the wall above.

Gas Fired Wall Radiators

Figure 6 shows a more or less recessed wall radiator, gas fired. As these units only cost about \$100 each, their adoption for small, one-story houses offers a definite investment saving with adequate heating. As the gases of combustion are vented outdoors, odors and water vapor in the rooms are not observed. These units appear to have definite advantages in regions isolated from electricity, but in which "bottled gas" is available. They are immune to storms that might disrupt service of electrically actuated units.

Floor Furnaces

A gas-fired, or oil-fired floor furnace can be provided for around \$200, including oil tank and connecting piping. Some of these units have an air-circulating fan, others depend on gravity.

The conventional floor furnace is of small size; usually it will have a top output of 50,000 to 60,000 Btu. per hour.

In the experience of this writer, they do not create warm floors, as is sometimes claimed. In fact, movement of air back to the heater has been observed to produce a noticeable draft at floor level.

Tests on temperature stratification at the National Bureau of Standards, Washington, D.C., indicate a 20F differential between the floor and ceiling for gravity circulation, and 10F if the heater is fitted with a fan

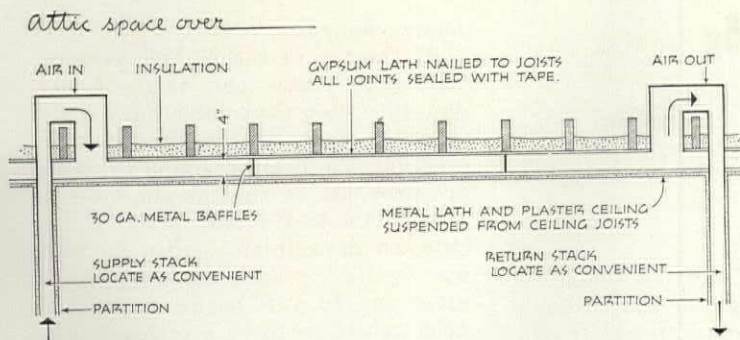


Figure 5.

and the returns are run under the floor.

Heat Pumps

An ordinary five-room house will require approximately five tons of cooling equipment, and for frame construction, 50,000 Btu. per hour for heating at 20F outside temperature. A heat pump for these requirements, at \$800 per ton means an investment of \$4000.

According to Table 1, which has been compiled from manufacturer's data, this five-ton unit is going to be short on the heating side if the outside temperature drops below 20F. If we live in a 0F climate, we must buy a larger heat pump, or alternatively find another source of heat rather than outside air. Water or earth is good, since city water seldom falls below 40F, and we can always dig below the frost line of the earth.

Operating figures on a five-ton unit in St. Petersburg, Florida, retail clothing store, show that \$29 per month was enough for an average winter month, where the average minimum temperature is about 40F.

Radiant Glass

Radiant glass units are being built in 1000 watt, 220 volt, 4½ ampere sizes for permanent installation, or with 110 volt, 9 ampere ratings for auxiliary heating in existing buildings.

Investment costs will average around \$95 per unit. Operating costs will vary with local current rates and the hours of use. The manufacturer offers the following formula for estimating operating costs:

$$\frac{\text{Tot. cu. ft.} \times \text{degree days} \times 0.2}{1000} = \text{Total kw-h}$$

In dollars and cents, this means about \$12 to \$13 a unit for a climate having 2400 degree days in a heating season, and an electric rate of 1.65 cents per kilowatt hour. Colder climates and other current rates should be estimated in proportion.

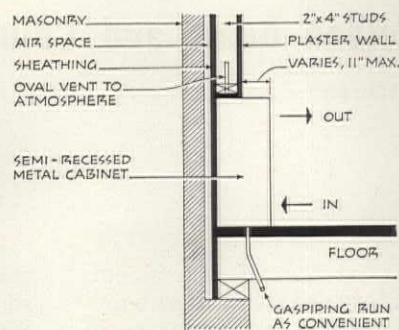


Figure 6.

CHART 2: SUMMARY OF HEATING SYSTEM CHARACTERISTICS

heating agent	especially suited	less suited for	comments
Mechanical Warm Air	(a) All-year conditioning (b) Low investment (c) Buildings without basements (d) Where air filtering and humidifying are necessary (e) For radiant ceiling panels (f) Attic installation of heater	(a) Lengthy duct runs (b) Old buildings (c) If duct space is critical (d) If duct appearance is ugly (e) For separated buildings	This means of heating is developing favor in homes and small buildings
Forced Circulation Hot Water	(a) Even temperatures (b) Radiators and convectors (c) Radiant heating in floors, walls, and ceilings (d) Baseboard radiation (e) Where small pipes are essential (f) Where gravity drainage is not practicable	(a) Sharp off and on control (b) Less heat output from unit heaters (c) For involved underground distribution (d) Basementless houses (e) Radiators below the hot water main	Properly designed and installed, hot water is always satisfactory
Steam	(a) Sharp off and on control (b) Unit heaters (c) Extensive distribution systems, underground, etc. (d) Public buildings with widely varying occupancy	(a) Where gravity drainage absent (b) Radiation below boiler water line (c) Basementless buildings (d) If low cost is essential	District steam in a neighborhood may be a deciding factor
Panel Heating	(a) Eliminates all heating equipment from a room (b) For new construction (c) May possibly reduce operating costs (d) Saves floor space	(a) Costs more than conventional systems to install (b) Low floor temperatures limit load acceptable on floor only (c) Old buildings	Use of this system is spreading. Is theoretically excellent
Baseboard Panels	(a) Responds quickly to outside temperature changes (b) Saves floor space (c) Is unobtrusive	(a) Water temperatures over 200F tend to streak walls (b) Not cheap to install (c) May be difficult to meet high heat demands if wall space is limited	
Gas Fired Wall Radiators, Recessed or Corner Style	(a) Heating of individual rooms as units (b) Isolated locations (c) Low-cost installation. Total less than a central plant warm-air system	(a) Buildings having vent problems. A number of pipes from roof or walls is not pretty (b) Vents in rooms deteriorate the room air	
Floor Furnaces	(a) Small buildings (b) Where minimum cost is paramount (c) Saves floor space	(a) Uniform room temperatures (b) If floor drafts are unacceptable	
Heat Pump	(a) Eliminates chimney (b) Reduces fire hazard by eliminating combustion (c) One piece of equipment both heats and cools (d) Automatically goes from heating to cooling cycle instantly as needed	(a) Comparatively expensive to install (b) Heating demands may govern size of unit	
Radiant-Glass	(a) Room tempering loads at beginning and end of season (b) Mild climates (c) Low electric rates (d) Low initial cost of installation	(a) Heavy and continuous heating (b) High electric rates tend to make uneconomical	

TABLE 1: HEAT OUTPUT OF HEAT PUMPS*

temperature outside air F	3h.p.	btu. per hour 5h.p.	7½h.p.	10h.p.
20	30,400	50,600	75,900	101,000
30	33,400	55,500	83,300	111,000
40	36,700	61,000	91,500	122,000
50	40,200	67,000	100,500	134,000

*Using Atmosphere As Heat Source

Arc-Welded Beam and Column Framing

BY NED L. ASHTON*

The recent erection of several outstanding all-welded steel frame buildings indicates the rapid advance of arc welding into the construction field. This advance is the result of original thinking and creative engineering by architects, engineers, and fabricators.

Arc-welded construction cannot be economically sound, if its design simply replaces rivets with welds. The problems of welded connections must be analyzed and solved by the application of new ideas.

As the details used in some of these recent structures are outstanding examples of sound engineering practice in welded construction, the principles involved can be studied with profit by all who have an interest in the progress of building engineering. The following paragraphs describe and illustrate the manner in which some heavy beam and column details have been accomplished.

Continuous Interior Girder

Figure 1 shows in trimetric projection a continuous interior wind bracing girder and column connection. This typical detail was used for some of the heavier framing at the

third-floor level of the new ten-story addition to the Register and Tribune Building in Des Moines, Iowa. Brooks and Borg were the consulting architects and engineers for this construction. C. A. Jenks, of Chicago, designed this detail for the Pittsburgh Des Moines Steel Company. It shows the junction of two 36 WF 260 girders with the flanges of a 14 WF 426 column, and two 16 WF 40 beams framing into the column web.

In this design, all holes were eliminated from the main columns by fillet and plug welding both erection brackets to the web and erection angles to the flanges. Thus the punching and drilling was confined to small pieces of angles easily handled for welding in the shop. Holes were provided, however, in the ends of the girder webs and in the outstanding legs of the erection angles. These holes were only used for drift pins and bolts in alignment and for temporary support during erection.

Full continuity was obtained at the bottom of the 36 WF girders. This was achieved by field butt welding the bottom flanges of the girder to the column flanges. The girder flanges bear opposite a stiffener that has been shop welded between the

column flanges.

At the top of the 36 WF girders, the cover plates and the stiffener plates between the column flanges are shipped loose for convenience in erection. Tie beam erection brackets are provided on the column webs to support the 16 WF beams. The plates between the column flanges are field butt welded to the column flanges after the 16 WF beams have been field welded to these erection brackets.

The outside cover plates are then butt welded to the outside faces of the column flanges and fillet welded to the top of the 36 WF girders to complete the detail.

Typical Wall Column

Figure 2 is a similar sketch of a typical wall column in the same building.

In this detail, only one 36 WF 260 girder is supported by the column, and the heavy field welds are therefore confined to only one flange of the column. The stiffener plates are field welded to the inside flanges and the web of the column, but are not welded to the outside column flange.

Rigidity for Seismic Forces

Another ingenious and well-designed detail of this type, where equal rigidity was provided in both directions for seismic forces, is shown in Figure 3.

This detail is found in the new Los Angeles Times Building. Rowland H. Crawford was the architect and

* Professor of Civil Engineering, University of Iowa. Consulting Engineer, The Lincoln Electric Company, Iowa City, Iowa.

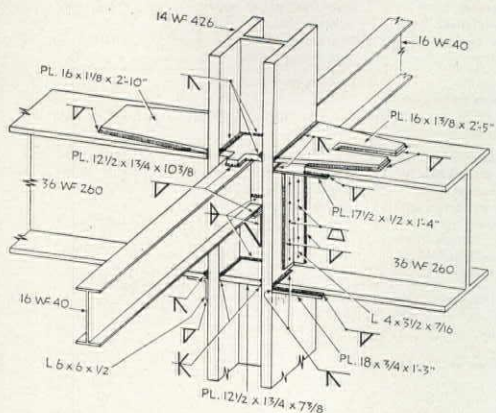


Figure 1.

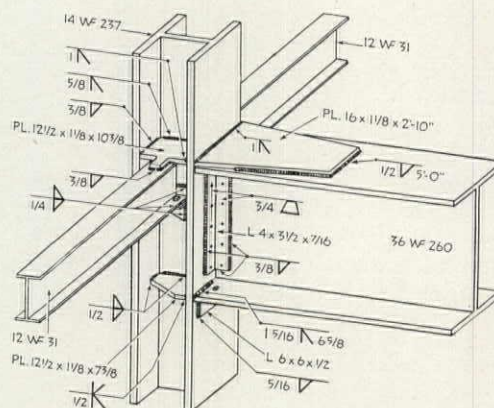


Figure 2.

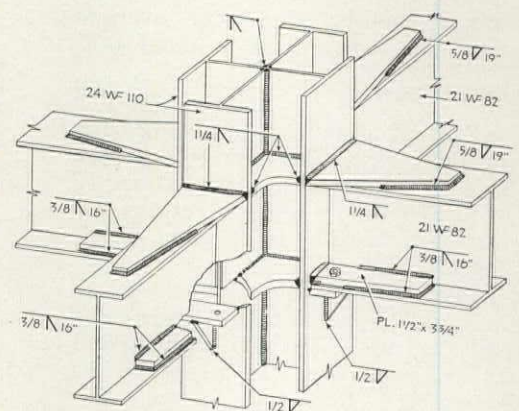


Figure 3.

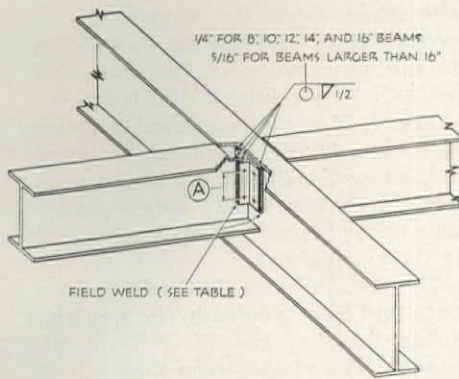


Figure 4.

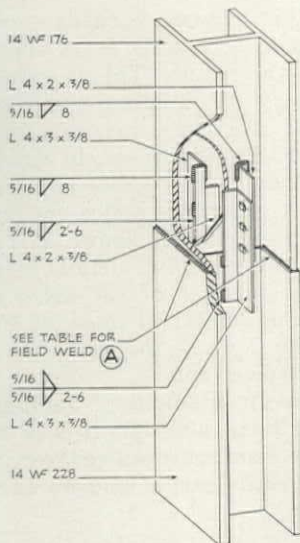


Figure 6.

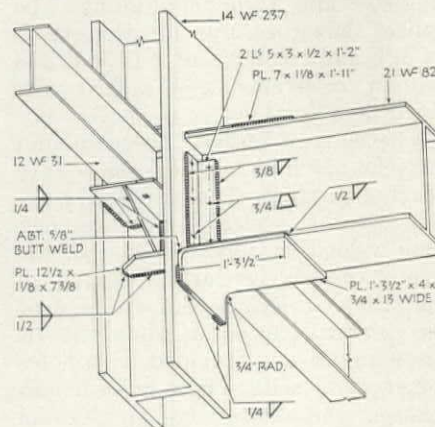


Figure 7.

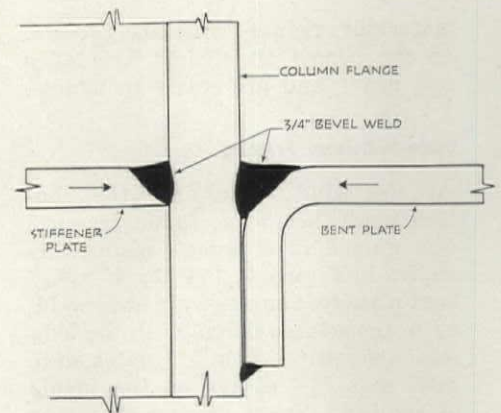
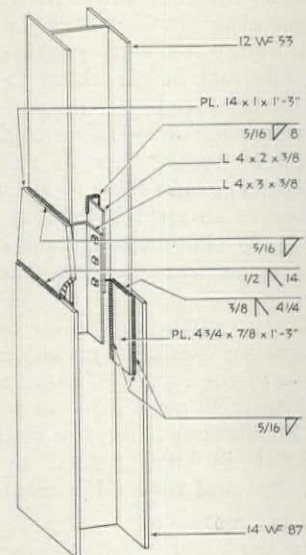


Figure 5A.



Holmes & Narver performed the structural, mechanical, and electrical engineering.

In this structure, 21 WF 82 beams were welded to all four flanges of a double 24 WF 110 cross type column. Shop welded plates, $1\frac{1}{4}$ " wide, between the column flanges and opposite the beam flanges, provide full continuity. Tee-shaped bracket beam seats were shop welded to the column flanges and provided $\frac{7}{8}$ " bolt holes to hold the beam during erection. The $1\frac{1}{4}$ " plates were single bevel welded to the inside of the flanges and to the web to provide diaphragms and back up plates.

Continuity is provided on the outside face of the column at the top of the girder flange by: 1) field butt welding $1\frac{1}{4}$ " top cover plates to the outside face of the column; 2) fillet welding the plates to the top flanges of the beam.

At all bottom flanges full continuity was provided by fillet welding $1\frac{1}{2}$ " x $3\frac{3}{4}$ " plates on the top of each bottom flange and on each side of the web.

Beam-to-Beam Connections

Figure 4 illustrates how simple beam-to-beam connections with end connection angles were made with the arc in the Register and Tribune Building addition.

All of the smaller sized beams in this structure were designed as simple beams with two standard connection angles at each end.

In this type of connection, one angle is shop welded to the supporting girder and the other is shipped loose, bolted to the girder. The outstanding legs of both of these angles are punched with a minimum number of holes so that the beam can be temporarily supported until the rest of the connection is welded.

The beam web is also punched at the ends for the erection bolts. In this manner, the beams only have to be cut to length, coped or blocked for erection clearances, and to have the web punched. They are then ready for painting, shipment, and erection. The principal detailing is confined to the main girders and larger pieces.

The punched holes and connection angles allow adequate erection clearances, and yet insure exact beam span lengths, correct main girder spacing, and provide excellent support for each individual beam connection. This support is provided without interference, during erection, from the beam connection on the opposite side of the girder.

Table I shows a typical set of standard welded simple beam connections of the type used on the Register and Tribune Building. The table gives the number of bolt holes that were provided for the erection of various sizes of beams, and also the amounts of welding for the permanent connections.

All of the smaller sized beams were designed as simple beams. Flanges were not field welded except for the main wind bracing and continuous girder connections to the columns.

In designing beam or beam-to-girder connections, shop punching of the main members should be eliminated as much as possible. This will

materially reduce fabricating costs, as the beams or girders are large and heavy and are costly to handle.

Beam-to-Column Framing

At the wind brackets, the continuity of beam-to-column framing was gained in a unique manner as shown in Figure 5. $15\frac{1}{2}'' \times 4'' \times \frac{3}{4}''$ bent plate seat angles were shop welded to the column flange with the long leg outstanding. The $\frac{3}{4}''$ plates were bent to a $\frac{3}{4}''$ radius on the inside of the bend. Space was provided for about a $\frac{3}{4}''$ butt weld between the back of the outside radius of the bend and the face of the column flange as shown in Figure 5A. At the same time, the 4" vertical leg of the bent plate is fillet welded to the column flange to help provide for shear. The rest of the shear is provided for by means of the end connection angles. One of these angles is shop welded to the face of the column with plug and fillet welds while the other is shipped loose and field welded to the column flange and beam web after the beam is erected in the field.

Continuity in the top flange of the wind bracing beam is provided for by means of the $7'' \times 1\frac{1}{8}''$ cover plate. This plate is shipped loose and then placed in position after the beam is erected. It is butt welded to the column first and then fillet welded to

the top flange of the beam.

This connection provides for the bending moment capacity of the beam combined with an end shear of 65,000 pounds. Suitable backing plates are also provided between the column flanges, as necessary, to resist the tension and compression forces without bending the column flanges.

Splices

Figure 6 shows a typical splice also used on the addition to the Register and Tribune Building. The splice shown is the junction of a 14 WF 176 column and a 14 WF 228 column occurring 2'-0" above the third floor level.

The ends of both of these column sections are first milled for a square bearing surface. The two lower inside erection splice angles are then shop welded on opposite sides of the web of the heavier column section, so that they project beyond the end of the column. The outstanding legs of these angles are provided with holes for erection bolts. These holes match those in the outstanding legs of the two angles that are shop welded to the upper column section.

The flanges on the lower end of the upper column section are V beveled or J grooved for welding, and the field butt splice is completed by filling these spaces with weld metal. The bevels on both flanges

are made from the same side to save handling and turning the column during fabrication in the shop and for ease of welding in the field.

Figure 7 exhibits a similar splice wherein a 12 WF 53 column is joined to the top of a 14 WF 87 column with the aid of two flange splice plates. This splice occurs just above the level of the sixth floor.

Two $4\frac{3}{4}'' \times \frac{7}{8}'' \times 1'-3''$ splice plates were first fillet welded to the web and inside faces of the 14 WF column flanges. The plates were then milled with this column. At the same time, one $14'' \times 1'' \times 1'-3''$ cover plate with the lower end prepared for welding was fillet welded to the outside face of the opposite flange of the 12" column.

In this manner, both flange welds are made accessible from the same side of the column. This is sometimes necessary for welding and convenience of erection, when new steel is erected adjacent to an old structure. The other details, splice angles, field bolts, etc., for this splice are similar to those previously shown in Fig. 6.

The column splice details used for splicing columns of the same depth were also similar to those of Figure 6. Table 2 gives the data for these other typical splices.

In the upper stories of the Register and Tribune addition it was found more economical to splice the columns with direct bearing and anchor bolt

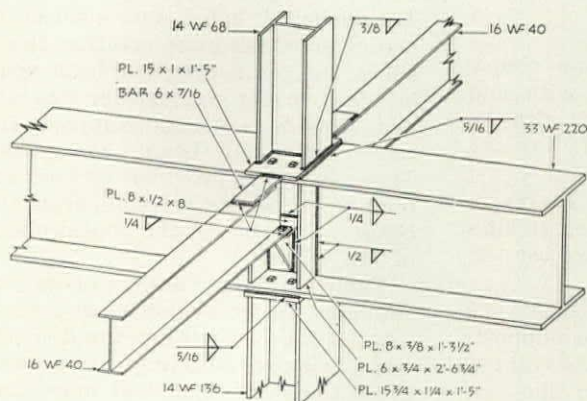


Figure 8.

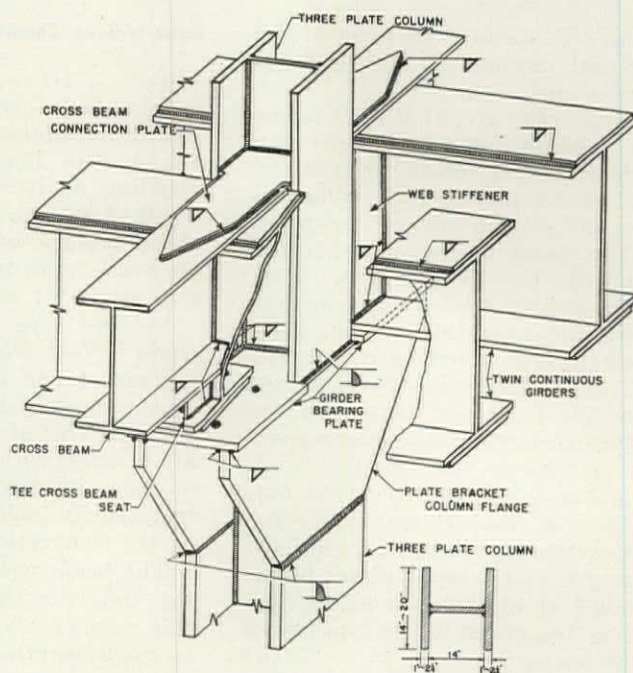


Figure 9.

TABLE 1

beam size	A	field weld	maximum shear (psi)
8" & 10"	No Spaces	1/4" x 0'-5-3/4"	13,800
12" & 14"	1 Space	1/4" x 0'-8-1/2"	25,200
16"	1 Space	1/4" x 0'-11-1/4"	36,700
18"	1 Space	5/16" x 0'-11-1/4"	48,000
21"	2 Spaces	5/16" x 1'-2"	65,000
24"	2 Spaces	5/16" x 1' x 4-3/4"	83,500
27"	2 Spaces	5/16" x 1' x 7-1/2"	101,000
30"	3 Spaces	5/16" x 1' x 10-1/4"	127,000
33"	3 Spaces	5/16" x 2'-1"	144,000
36"	4 Spaces	5/16" x 2'-3-3/4"	161,000

TABLE 2

size of upper column	weld A		capacity one weld
	depth of chamfer	length of weld	
14 WF 142 to 14 WF 426	1/2"	15-1/2"	113,000 #
14 WF 87 to 14 WF 136	3/8"	14-1/2"	80,000 #
Cols. with flgs. 12" Wide	3/8"	12"	65,000 #
Cols. with flgs. 10" Wide	5/16"	10"	44,000 #
Cols. with flgs. 8" Wide	1/4"	8"	27,000 #

details, as shown in Figure 8. Bearing on the top and bottom sides of the girder was found more economical than providing a splice at the point of maximum moment in the 33 WF 220 continuous girders.

Thus, milled 6" x 3/4" bearing plate stiffeners were welded to the web of the girder between flanges to provide a full bearing support for the upper 14 WF 68 column. The 1 1/4" cap plates, on the top and bottom ends of the columns, were bolted temporarily, and later permanently welded to the girder flanges.

The cap plates were shop welded to the ends of the column sections. They were permanently field welded to the girder flanges after plumbing and aligning the structure.

Continuity in Both Beam and Column

Another interesting method of providing for continuity in both the beams and the column is shown in Figure 9.

This detail was proposed for the main framework of a large British Nylon Factory of welded construction. This plant is three stories high, 1000 feet long, and 324 feet wide. The floor-to-floor heights were 19 feet for the first story and 13 feet for the second and third.

The column spacing formed 25 foot by 54 foot bays. The columns were formed by shop welding three plates together. Plate brackets were welded into the plane of the column flanges to form integral portions of the column flanges, projecting outward to support the girders. Plate brackets can be made to support loads equal to the load capacity of the column.

The main girders of this structure

were made as twin continuous girders supported on the bracketed column flanges. In this manner, the girders may run by both sides of the column without interference. The columns can be completely fabricated in the shop and erected in the field as single units—units three stories high and without field splices. The girders are made to cantilever past the columns with field splices at the points of inflection.

These details saved from 4 to 5 percent of the weight of conventional riveted columns, and about 15 to 20 percent of the weight of the girders. The cost was no higher than the prevailing price per ton for columns and girders of riveted design.

The loads in the individual columns varied from 225 to 765 tons per column. As all columns were fabricated as three plate sections, the plate sizes for the column sections were varied to suit the individual load requirements at each story.

Four Angle Column Section

Figure 10 is similar. In this instance the columns are spread and single web continuous girders run through the four angle column section. This detail, designed by Maurice Sasso, consulting engineer, is found in the extension of the Los Angeles Bell Telephone Building.

The main girders are supported on cross channel batten plates and run directly through the main columns. The four angle column sections are only intended to provide temporary supports during erection. In the final structure, they comprise part of the composite steel and concrete columns.

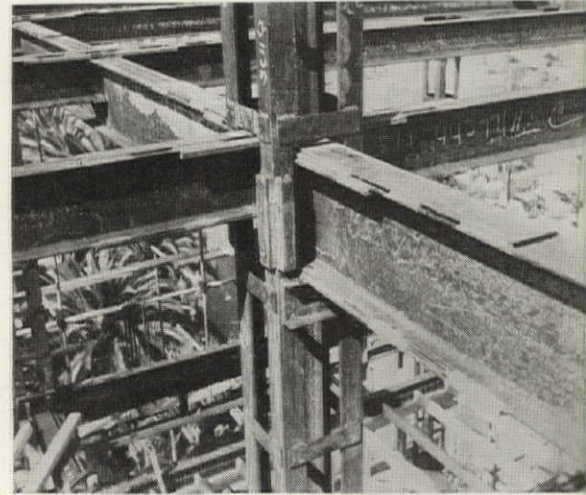


Figure 10.

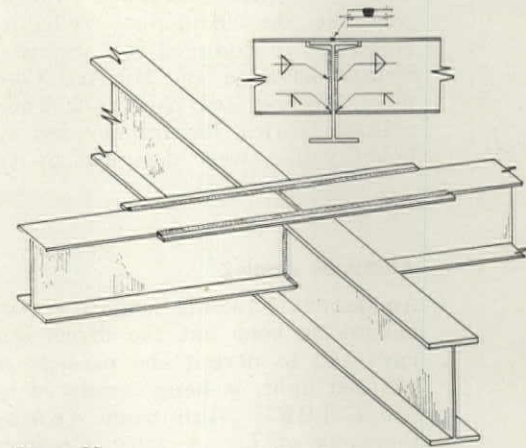


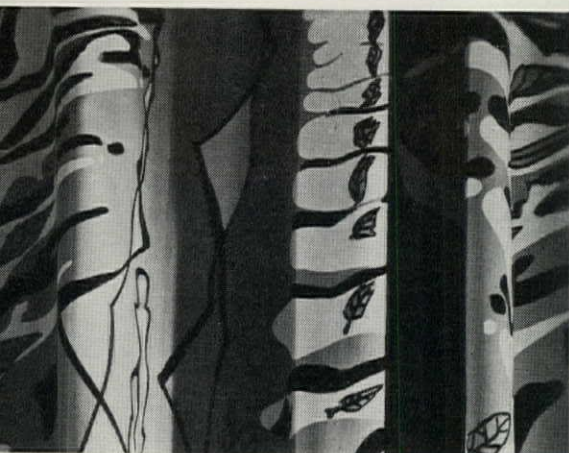
Figure 11.

Continuous Beam-to-Beam Framing

Figure 11 is a sketch of the continuous beam-to-beam framing detail also used in this building. The top flanges of the beams are extended across the top flange of the girder and butt welded together on the center line of the main girder. The additional negative moment flange requirements are made up by cover plates added to the edges of the flanges. The intensity of stress on the butt weld is reduced in proportion to this extra flange material. The web and bottom flanges of the beams are cut to the profile of the main girders. During erection the beams are supported by the top flanges while the webs are being welded to the main girders for shear.



PRODUCTS



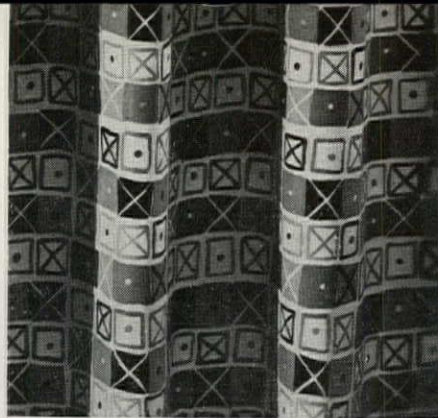
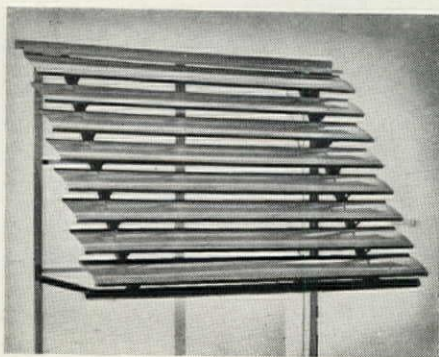
Stimulus Collection

Thirty-two hand-screened fabrics comprise the "Stimulus" collection recently introduced by Schiffer Prints Division of Mil-Art Company, Incorporated, New York. These printed fabrics, for drapery and upholstery use, were designed by six

Aluminum Awning

An aluminum awning, made of curved louvers to keep out the direct sun rays and to permit the passage of diffused light, is being produced by the C-THRU Aluminum Awning Company of Los Angeles. Crowned louvers were designed by light engineers to give a maximum of diffused light. Light coming through the awning hits the louvers and is broken up into smaller rays which are reflected to the reverse crown above. The rays are diffused again before they are allowed to enter the home as glare-free light. A patented support post divides and holds the louvers in an open position.

A screw driver and ten minutes' time is all that is required to assemble this awning. Other advantages claimed by the manufacturer are: shade without obstruction; better temperature control inside; no seasonal maintenance, sag, burn, rust, rot, or tear. Available in 36 sizes, they are said to save half the cost of having custom awnings installed.



Above: "Cross Patch." Designed by Ray Eames for use in a child's room. Left: Salvador Dali's "Spring Rain." Not tear-shaped, but geometric, as seen through the stroboscope's eye.



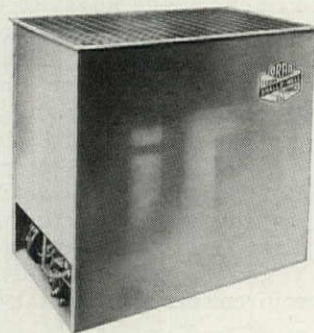
"Chips." George Nelson's small geometric forms, accented by black shadows, have a three-dimensional effect.

outstanding artists in the related fields of architecture, interior and industrial design, and the fine arts. The designers were Salvador Dali, painter; Ray Eames, sculptress; George Nelson, architect-designer; Bernard Rudofsky, editor-designer; Abel Sorensen, architect-designer; and Edward J. Wormley, furniture designer.

Each design is available in three different color schemes. All of the fabrics are vat-dyed, color-fast, and 50" wide. As the pattern repeats are either 27" or a multiple thereof, the fabrics may be used for slipcovers

and upholstery with minimum waste.

The collection was produced in an effort to bring good contemporary design into the homes of the medium-income-bracket consumer. Retail prices will range from \$3.95 to \$6 per yard. The fabrics are now available to architects, designers, and decorators through L. Anton Maix, New York merchandising coordinator who originated and developed the program for the collection. Eighteen selected prints will be available to the consumer at leading retail stores throughout the country about September 1.



Oil-Fired Floor Furnace

An automatic oil-fired floor furnace with an over-all height of only 34" is now manufactured by the Oran Company, Columbus, Ohio. Known as the Oran Shallow-well Model 0-70 Super, this product is Underwriters-approved and rated at 70,000 Btu. The shallow depth greatly reduces building costs on new construction and simplifies installation in existing structures. Armco aluminized steel is used in the combustion assembly, stainless steel in the burner. The unit is finished in baked enamel.

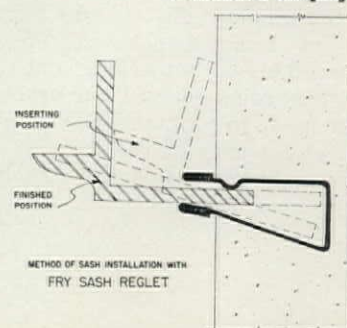
An exclusive auxiliary cold air return draws cold air from hard-to-heat areas for more uniform comfort.

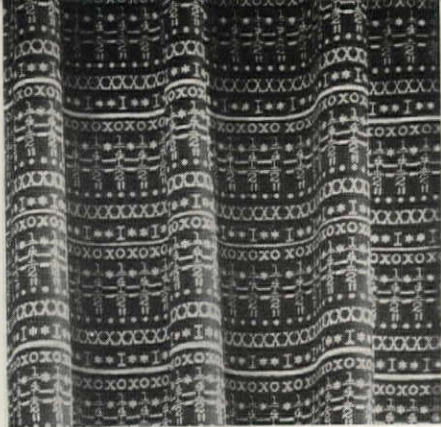
Sash Reglet

A new method of metal sash installation that eliminates all grouting and calking, and reduces installation time to less than five minutes, has been announced by the Fry Reglet Company, Birmingham, Michigan. The method employs a rolled section, known as a sash reglet, which is imbedded in a concrete wall or inserted in a masonry joint. The method does not require expansion bolts, clips, angles, wedges, or bracing wires, and allows the contractor to erect the walls without having sash on hand.

For concrete construction, the rolled section is mounted on a wood buck. After pouring, the buck is removed and the reglet left imbedded in the wall. Metal sash is inserted in the reglet and the sill cast to complete the installation. In masonry work,

(Continued on page 140)





"Fractions." Bernard Rudofsky has used typewriter type to achieve this ingenious pattern.



"Eclipse." Lunar phenomenon translated into a fabric pattern by Abel Sorensen.



"Primitive Key." Classic key motif, generously scaled, was created by Edward J. Wormley.

this month's products

air and temperature control

Agitair "CNO" Exhauster: weatherproof, heavy-gauge steel unit, with wide "venturi-type" orifices, for roof ventilating, vent flues, and chimney tops. Available in standard head sizes from 5" to 48". Air Devices, Inc., 17 E. 42nd St., New York 17, N. Y.

Electriglas Radiant Heat Panels: units composed of metallic alloy grid, fused into Temprex glass; infrared heat generated by current passing through grid. Flush wall installation makes possible more efficient use of floor space. Portable models also available. Both operate on a.c. or d.c. 110v or 220v circuits. Appleman Glass Works, Bergenfield, N. J.

Fire Chief: low-price, automatic boiler-burner unit, employing new cross feed principle and burning anthracite across simple, stationary, perforated plate; ashes automatically spill into container, eliminating any ash removal mechanisms. Year-round hot water supplied from built-in tankless coil. Two sizes, one with 80,000 Btu. capacity, the other, with 130,000 Btu. Coal-O-Matic Co., Trucksville, Pa.

"Air-Wall" Heating: packaged forced warm-air heating system for small homes; standard 4" stovepipe ducts and adjustable elbows, registers and grilles for installation above baseboards. System can be used with either G-E oil- or gas-fired furnaces. General Electric Co., Bloomfield, N. J.

Sahara Dehumidifier: low-cost apparatus for combating moisture problems in industry. Equipped with hopper filled with dehydrating chemical, unit draws in air by means of motor connected to axial flow fan, extracts moisture, disposes it in 2½ gal. container. Enclosed in two-tone mahogany cabinet about size of water cooler. Niagara Industrial Corp., 20 Vesey St., New York, N. Y.

10-Ton Air Conditioner: free-standing unit requiring no duct work; all-copper condenser, silver soldered throughout, adaptable for city water or water tower application. Over-all dimensions: 27" deep, 52" wide, 93" high. Typhoon Air Conditioning Co., Inc., 794 Union St., Brooklyn 15, N. Y.

construction

"Random Clear" Insulux Glass Block: non-geometric face design and subtle irregularities in contours give appearance of hand-finished product, although manufactured by precision methods. Especially adaptable for decorative purposes in houses, theaters, stores, etc. American Structural Products Co., Ohio Bank Bldg., Toledo 1, Ohio.

Bloxolite: plastic (Styron) block for building partitions, drop ceilings, displays, for installation in places where heavier materials would be prohibitive. No mortar, caulking, or adhesive required unless waterproof partition is desired. Bloxolite Co. of America, 706 Penn Ave., Pittsburgh 21, Pa.

Simplex Gym Ceiling: sectional units, composed of extra strong, thick aluminum (or bonderized steel), perforated panels, suspended by galvanized snap bars supported directly to building structure by rigid angles and accessories. Dent-proof panels easily removed for access or replacement; no paint needed to protect easily cleaned surface. Noninflammable, uniform air distribution, 75% noise reduction. Simplex Ceiling Co., 552 W. 52nd St., New York 19, N. Y.

doors and windows

All-Aluminum Screen Door: will fit openings that sag or are out of line; aluminum frame covers wood stripping used to square and adjust opening to proper size. Manufactured in all sizes, with 1" variations in width and height. Alumatic Corp. of America, 1229 S. 41st St., Milwaukee 4, Wis.

No. 77 "Over the Top" Garage Door: low-priced, 24-panel plywood unit will fit openings 8' wide by 6'8" high, requires only 2" headroom. Equipped with all necessary hardware and steel weatherstripping. Frantz Mfg. Co., Sterling, Ill.

Spring-Cushioned Door Stop: small metal gadget with cushioning internal spring and soft rubber bumper, for mounting on baseboard or door; helps overcome noise and damage when doors are slammed back. Wesco Electric Co., 5310 Milwaukee Ave., Chicago 30, Ill.

electrical equipment and lighting

Guth Mazelite: all-metal industrial luminaire with turret sockets for quick, easy lamp changes; hinged reflector completely removable for cleaning. Edwin F. Guth Co., 2615 Washington Ave., St. Louis 3, Mo.

Varsity: fluorescent lighting fixture claimed to combine large light volume with small cost. May be used as single unit or in continuous runs; baffle-type louvers offer shielding angles of 25°-27°, easily removed for maintenance purposes. Housing and channel are of 20-gage steel with white baked enamel finish. Suitable for offices, stores, classrooms. Leader Electric Co., 3500 N. Kedzie Ave., Chicago 18, Ill.

CL-296: 8-foot, louvered fixture utilizing two 75w T-12 instant start lamps; 20-gage steel construction, finished with baked white Miracoat, providing minimum reflection factor of 86%. May be surface or pendant mounted, or joined to similar units to form continuous rows. Sylvia Electric Products, Inc., 500 Fifth Ave., New York, N. Y.

finishers and protectors

Asepticote: interior wall coating, with chlorinated rubber content, will withstand frequent washings and still maintain uniformity. Available in popular deep colors and light pastels.

Truscon Laboratories, 1620 Caniff St., Detroit 11, Mich.

sanitary equipment, water supply, drainage

Softenal: two-tank water softener unit, furnished with ultra-high-capacity zeolite softening material, which is permanent and can be regenerated indefinitely. Manufactured in four sizes, largest requiring floor space of only 22" x 38", the smallest 16" x 26". Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.

specialized equipment

No. 1518 Bull's-Eye Lamp Type Supervisory Annunciator: gives both visual and audible alarm when trouble develops with overheated bearings, low fuel level, too low or too high pressures, etc., in industrial plants, refineries, etc. Designed for flush, surface, or panel mounting, open or closed circuit operation, on voltages from 24v to 250v, a.c. or d.c. Auth Electric Co., 34-20 45th St., Long Island City 1, N. Y.

Claywood Contemporary Furniture: new gate-leg drop-leaf dining table in solid Western maple, added to line of low-cost modern furniture. Claywood Design Products, 1515 Mill St., Springfield, Ore.

Circ-L-Scale: vest-pocket drawing instrument; combination of protractor, compass, square, scale, and lettering device. Made of Anderolite plastic, which will not distort, warp, or burn. L. A. Cuson, 9100 Roselawn Ave., Detroit 4, Mich.

General Chef: combination electric refrigerator and two-burner range, available in 110v model. Both units plug into any circuit with one plug. General Air Conditioning Corp., 4542 E. Dunham St., Los Angeles 23, Calif.

surfacing materials

Vinatred: vinyl plastic carpeting with textured surface, applied on sponge rubber base, for use in stores, hotels, hospitals, or wherever constant traffic is factor; flame resistant, non-porous, will not absorb dirt. Comes in rolls 36" wide, in three qualities, seven colors. Southbridge Plastics, Inc., 470 Fourth Ave., New York 16, N. Y.

Lamidall: tough, stainproof plastic surface material, bonded to Masonite Presdwood, for application on existing walls. Resists heat, moisture, abrasion, unaffected by water, soap, beverages, fruit juices, and common solvents. Can be applied by nailing or cementing. Comes in panel form, in range of sizes up to 4' x 12', in selection of colors, patterns, and wood grains. Service Products Div., Woodall Industries, Inc., 2035 S. Calumet, Chicago, Ill.



Manufacturers' Literature

★ *Editors' Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.*

AIR AND TEMPERATURE CONTROL

1-289. **Roto-Clone (277A)**, 20-p. illus. bulletin on dynamic precipitator of the hydro-static type; air cleaning action obtained with inverted S-shape water curtain. Operating principle, advantages, arrangements, dimensions, water level control, characteristics, capacity chart, other technical data; other dust control equipment and brief descriptions. American Air Filter Co., Inc.

1-290. **Type "F" Worm-Feed Stokers**, AIA 30C-1 (S-41), 8-p. illus. bulletin on stokers with coal burning rates of 75 to 312 lbs. per hour. General information, data table, description of parts, diagrams. Brownell Co.

Booklet and two folders describing complete line of gas floor furnaces, forced air heating systems, and radiant type oil heaters. General data and specifications of models, construction, installation plans, operations. Coleman Co., Inc.:

1-291. **Your New Measure of Low Cost Heating Comfort** (Cat. 3A)

1-292. **Blend-Air (A-957)**

1-293. **Fast Action Oil Heaters (A-921E)**

Catalog describing line of air-conditioning, heating, and refrigeration equipment. Descriptions of types, data tables, features, photos, index. Also booklet on year-round air conditioner for residential installation. General information, operation drawings, advantages. Chrysler Airtemp, Div. of Chrysler Corp.:

1-294. **Chrysler Airtemp (L-115)**

1-295. **Enjoy Resort Weather (L-127)**

1-296. **Counterflo Forced Air Space Heaters**, AIA 30C43 (Bul. 523), 12-p. illus. booklet on commercial and industrial warm air heater, providing not only all-year heating and ventilating, but also process drying, tempered makeup air, and heat curing. Description of each function, analyses of mechanical parts, advantages, specifications, capacity and dimension table. Dravo Corp.

1-297. **A Dream of Green Air** (Bul. 118), 16-p. illus. booklet on air recovery unit consisting of canisters containing activated carbon, for installation in air conditioning systems. General information. W. B. Connor Engineering Corp.

1-298. **Blowers—Exhausters (B-5-A)**, 4-p. bulletin on centrifugal types for handling air and gases of various densities, temperatures, and chemical composition. Descriptions, capacities, general specifications, photos. Allen Billmyre Div., Lamson Corp.

1-299. **The Nesbitt Syncretizer (258)**,

4-p. booklet on unit ventilator, especially adaptable to classrooms; can be integrated with storage cabinets to make proper use of space below windows. Features, operating performance drawing. John J. Nesbitt, Inc.

CONSTRUCTION

3-84. **Bloxolite**, 4-p. illus. booklet on lightweight plastic block, with framework of interlocking lattice-type wood strips, for construction of partitions, drop ceilings, and for decorative uses. General information, erection data. Bloxolite Co. of America.

3-85. **Facts About Lumber**, AIA 19A3 (A-6771), 16-p. illus. booklet providing general information and analysis of problems in use of lumber preserved with Du Pont chromated zinc chloride. Typical specifications, photos, index. E. I. Du Pont de Nemours & Co., Inc.

3-86. **Steel Buildings**, AIA 13 (Cat. B-37), 12-p. booklet on industrial steel buildings; standard designs and large stocks of steel in centrally located warehouses provide quick delivery and facility of erection; claimed to have shorter time lapse between order and completion than any other type of building. Advantages, typical installations, details, typical plan suggestions, sections, fastening methods. International Steel Co.

3-87. **Bronze Mouldings by Loxit**, AIA 23-1, 4-p. booklet. Tee sections, angles, flat strips, coves, edgings, stair nosings, etc. Descriptions, dimensions, illustrations. Loxit Moulding Co., Div. of Loxit Systems, Inc.

3-88. **Marble in the Hospital**, AIA 22-A, 8-p. illus. booklet describing use of marble in hospital interiors. Advantages, photos, membership list of M.I.A. Marble Institute of America.

Five booklets on modular, structural clay tile and box cap-mold. Descriptions, technical data, construction details, unit specifications, advantages, cap-mold shape details. National Fireproofing Corp.:

3-89. **Dri-Speedwall Tile**, Buff Unglazed, AIA 10-B (DRI-17)

3-90. **Salt-Glazed Dri-Speedwall Tile**, AIA 10-B (SG-1)

3-91. **Ceramic Glazed Vitritile (PF 47)**

3-92. **Modular Glazed Vitritile**, AIA 10-B (4D-548)

3-93. **Modular Box Cap-Mold**, AIA 10-B (BCM 648)

★ 3-94. **Introducing Simmons Roto-Lock**, AIA 17-F (NN), 4-p. illus. booklet describing new butt-joint panel fastener; special design permits

its use for right-angle connections; fastener recedes completely into panels, leaving no exposed parts. Description, operating performance, load ratings. Simmons Fastener Corp.

3-95. **Uni-Forms (S.A. 17)**, 34-p. illus. catalog on concrete forming system for all wall sizes. Description, general data, advantages, typical uses and photos. Universal Form Clamp Co.

3-96. **Glasiron**, 8-p. booklet providing brief description of porcelain enamel building fronts. Advantages, photos. Wolverine Porcelain Enameling Co.

DOORS AND WINDOWS

4-204. **Facts About Glazing**, 12-p. booklet. Application of putty and compounds, winter glazing, problems of aluminum sash, rules and recommendations. Dicks-Pontius Co.

4-205. **Flush Doors**, AIA 19E (1-107), data sheet describing flush panel door with scientifically spaced rigid cylinders attached to core, to provide overall support for hardwood faces. Construction features, typical sizes and weights. General Plywood Corp.

4-206. **Everything Hinges on Hager**, 128-p. illus. catalog on wide line of hinges, bolts, latches, sash lifts and pulleys, and other hardware accessories. Numerical and alphabetical indexes, descriptions, symbols of finishes, applications, sizes, dimensions. C. Hager & Sons Hinge Mfg. Co.

4-207. **Extruded Aluminum Store Front Construction**, 4-p. illus. booklet containing construction details of sash, jambs, corner and division bars, and other parts. Typical installation photos. Martin Katz Co.

★ 4-208. **Kennatrack File**, AIA N27-A, portfolio containing two booklets, two folders, and set of technical data sheets, describing single and double sliding door tracks employing patented expansion plug door mounting device. Description, advantages, details, sections, elevations, installation. Jay G. McKenna, Inc.

4-209. **Windalume**, 8-p. booklet on double-weatherstripped, double-hung aluminum windows. Standard sizes and types, specifications, details, installation instructions. Windalume Corp.

ELECTRICAL EQUIPMENT AND LIGHTING

Two booklets on fluorescent lighting equipment, combined incandescent-fluorescent fixtures, and flexible lighting units (Formlites). Descriptions, types, drawings, photos. Gotham Lighting Corp.:

5-208. **Gotham Architectural Lighting** (GLC15)

5-209. **Formlite** (GLC-16)

Two booklets describing revolving armature generators and revolving field a.c. generators, both designed to carry 25 percent overload without exceeding allowable temperature rise. Also folder describing 2500w electric plant, built for two types of service: a.c. supply and as combination 32v battery charging plant and 110v a.c. Models, descriptions, ratings, technical data tables. Kato Engineering Co.:

5-210. **Revolving Armature Generators** (747)

5-211. **Revolving Field A.C. Generators** (3149)

5-212. **Katolight Plants** (148-C)

★ 5-213. **Kohler Electric Plants**, 24-p. illus. catalog on various models, for use where central station service unavailable. Proper selection, specifications, multiple plant installations, drawings, photos. Kohler Co.

5-214. **Rambusch "Aura"**, AIA 31-F-1, 4-p. illus. booklet on incandescent lighting fixture for ceiling suspension; aluminum fabrication, swivel joint assuring vertical hanging. Descriptive drawings, lamps recommended. Rambusch Co.

5-215. **Midget Ever-Lok** (EL-49), 12-p. illus. catalog featuring automatic-locking plugs, receptacles, and cord connectors. Brief descriptions, dimensional drawings, illustrations, ordering information. Russell & Stoll Co., Inc.

5-216. **Originals By Kurt Versen** (KV 299), loose-leaf catalog containing descriptions, photos, of table, floor, and pin-up lamps of modern design, finished in baked enamel. Price list, color chart. Kurt Versen Co.

5-217. **The Wiley Seminar**, 4-p. bulletin on fluorescent fixture, for suspended or flush-to-ceiling installation; designed especially for classroom lighting, but adaptable to any commercial use. Description, laboratory test reports. Also spotlights for individual use or in combination with Seminars. R. & W. Wiley, Inc.

FINISHERS AND PROTECTORS

6-171. **Perma-Skin**, 4-p. booklet on corrosion-resistant, protective vinyl coatings for application on metal, wood, stone, brick, and concrete structures and equipment. Advantages, characteristics, recommended applications. Also, underprimer for metal, which eliminates need for preliminary chemical treatment. Dennis Chemical Co.

6-172. **Gold Leaf in Architecture**, 4-p. bulletin briefly describing gold and other metallic leaf and their applications in architecture. Preparation, specification, maintenance, typical gold leaf applications. Hastings & Co., Inc.

6-173. **Exterior Masonry Waterproofing Manual**, 29-p. manual giving complete directions for applying one-coat Crystal Silicone water-repellant to all types

of masonry material. Suggested specifications, index. Wurdack Chemical Co.

INSULATION (THERMAL, ACOUSTIC)

9-137. **Rubutex Insulation Hardboard**, AIA 37 (RBH), 6-p. illus. folder on method of insulating cellarless houses to eliminate cold, damp floors. Description of hardboard, composed of expanded, synthetic rubber compound; construction suggestions, specifications, technical data, drawings. Rubutex Div., Great American Industries, Inc.

SPECIALIZED EQUIPMENT

19-445. **Custom In-Built Home Music System**, 6-p. illus. brochure showing concealed installation, in residential interior, of music system elements: AM-FM tuner, amplifier, loudspeaker, and record changer. Typical examples, description of parts, installation data. Altec Lansing Corp.

19-446. **Autocall Paging Systems**, portfolio containing set of booklets, folders, and single sheets on various types of paging systems. Cost comparisons, maintenance, testimonials, descriptions of bells, chimes, whistles, and models of central sending stations. Autocall Co.

19-447. **Hospital Signaling Systems** (H-1), 32-p. bulletin on nurses' call, doctors' paging, doctors' in and out register, fire alarm, private telephone, and return call systems and equipment. Descriptions, wiring diagrams, symbols chart, specifications, composite hospital and nurses' home floor plan, photos, index. S. H. Couch Co., Inc.

Three folders illustrating contemporary furniture from the William Armbruster collection; designed for commercial purposes, for use in public lobbies, lounges, shops, etc. Photos, brief descriptions. Edgewood Furniture Co., Inc.:

19-448. **For Smart Lobbies and Lounges**

19-449. **For Your Millinery Department**

19-450. **For Smart Shoe Salons**

19-451. **Designs for Bathrooms**, 12-p. full color booklet showing line of enameled cast-iron bathtubs and lavatories. Dimensions, illustrations, planning suggestions. Humphries Mfg. Co.

19-452. **Your Kelvinator Kit** (1949), portfolio containing photographs and description of four new home freezers ranging in size from 6 to 20 cu. ft. Kelvinator Div., Nash-Kelvinator Corp.

★ 19-453. **Knoll**, 20-p. illus. brochure presenting examples of integration of modern furniture with various types of residential, commercial, and other interiors. General information, photos, brief descriptions of furniture and textiles. Knoll Assoc., Inc.

Two bulletins on lightning protection system for residential and public buildings; entirely invisible except for inconspicuous 10-in. air terminals; can be installed only during construction. Specifications, diagrams, typical installations. West Dodd Lightning Conductor Corp.:

19-454. **Lightning Protection**, AIA 31-D-8

19-455. **Lightning Protection for Schools, Churches, and Public Buildings**, AIA 31-D-8

SURFACING MATERIALS

19-456. **How to Apply Kaiser Aluminum Roofing**, folder describing method. Illustrations, advantages, special nailing details, sizes, shapes. Permanente Products Co.

19-457. **Vermont Slate**, 4-p. booklet on natural colored slate for roofing. Advantages, characteristics, application data, colors, sizes, specifications. Rising & Nelson Slate Co., Inc.

19-458. **Korina**, 4-p. booklet showing new, light-colored plywood resembling Prima Vera, for cabinet and wall paneling. General data, specifications. U. S. Plywood Corp.

(To obtain literature coupon must be used by 12/1/49)

PROGRESSIVE ARCHITECTURE, 330 West 42nd Street, New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature circled below.
We request students to send their inquiries directly to the manufacturers.

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3-89	3-90	3-91	3-92	3-93	3-94	3-95	3-96
4-204	4-205	4-206	4-207	4-208	4-209	5-208	5-209
5-210	5-211	5-212	5-213	5-214	5-215	5-216	5-217
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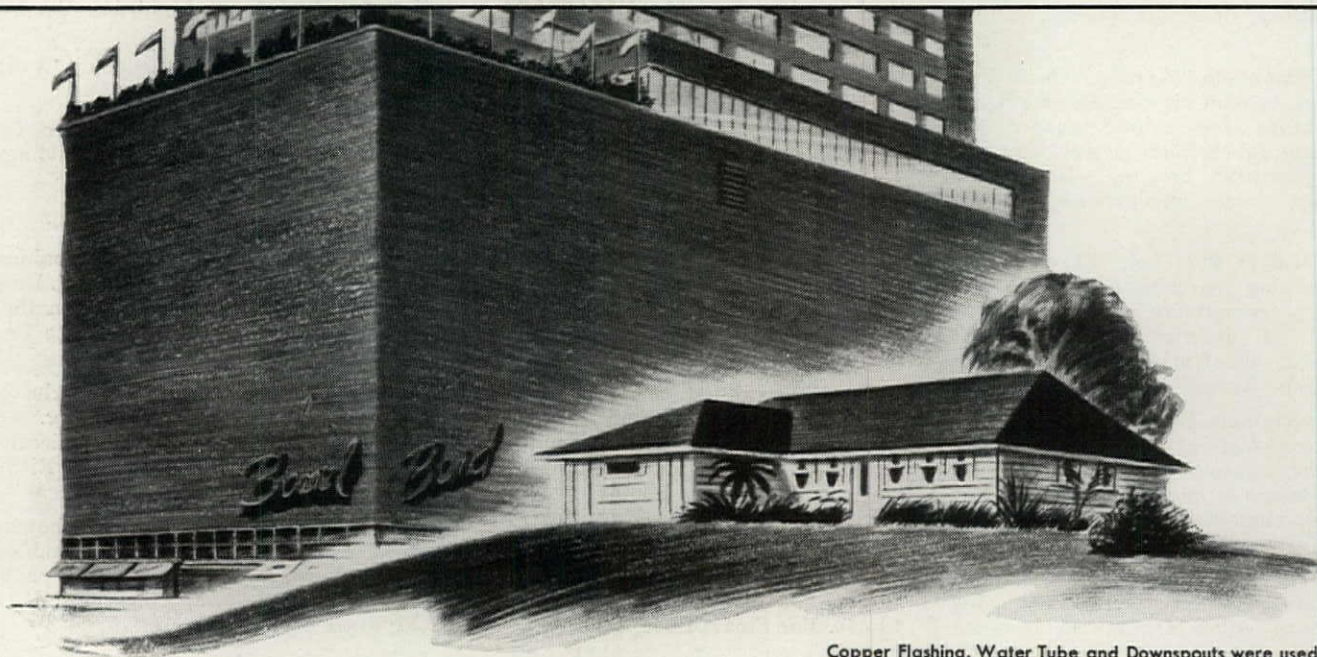
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9/49



Terrace Plaza Hotel, Cincinnati, Ohio, in which some 135,000 pounds of Revere Copper Water Tube were installed.

IN BUILDINGS LARGE OR SMALL REVERE PRODUCTS INSURE QUALITY



Copper Flashing, Water Tube and Downspouts were used in this Revere Quality House at Parma Heights (Cleveland) Ohio.

TROUBLE always costs more than Revere Copper. That's why—in every type of building—it pays to let *lasting* Revere Copper guard those vital points where water will cause other materials to rust, rot or corrode.

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PIPING. Used as piping for heating systems, water supply and waste lines, Revere Copper Water Tube provides a lifetime of trouble-free service. The interiors of this tube do not become clogged by corrosion; and remaining permanently smooth, they reduce frictional resistance to a minimum. In addition, because Revere Copper Water Tube bends readily, and joints are made quickly with solder fittings, this tube is easier to install.

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► The products above and other Revere products of copper, brass and bronze are available from leading distributors throughout the United States. A Revere Technical Advisor will always be glad to consult with you, without obligation.

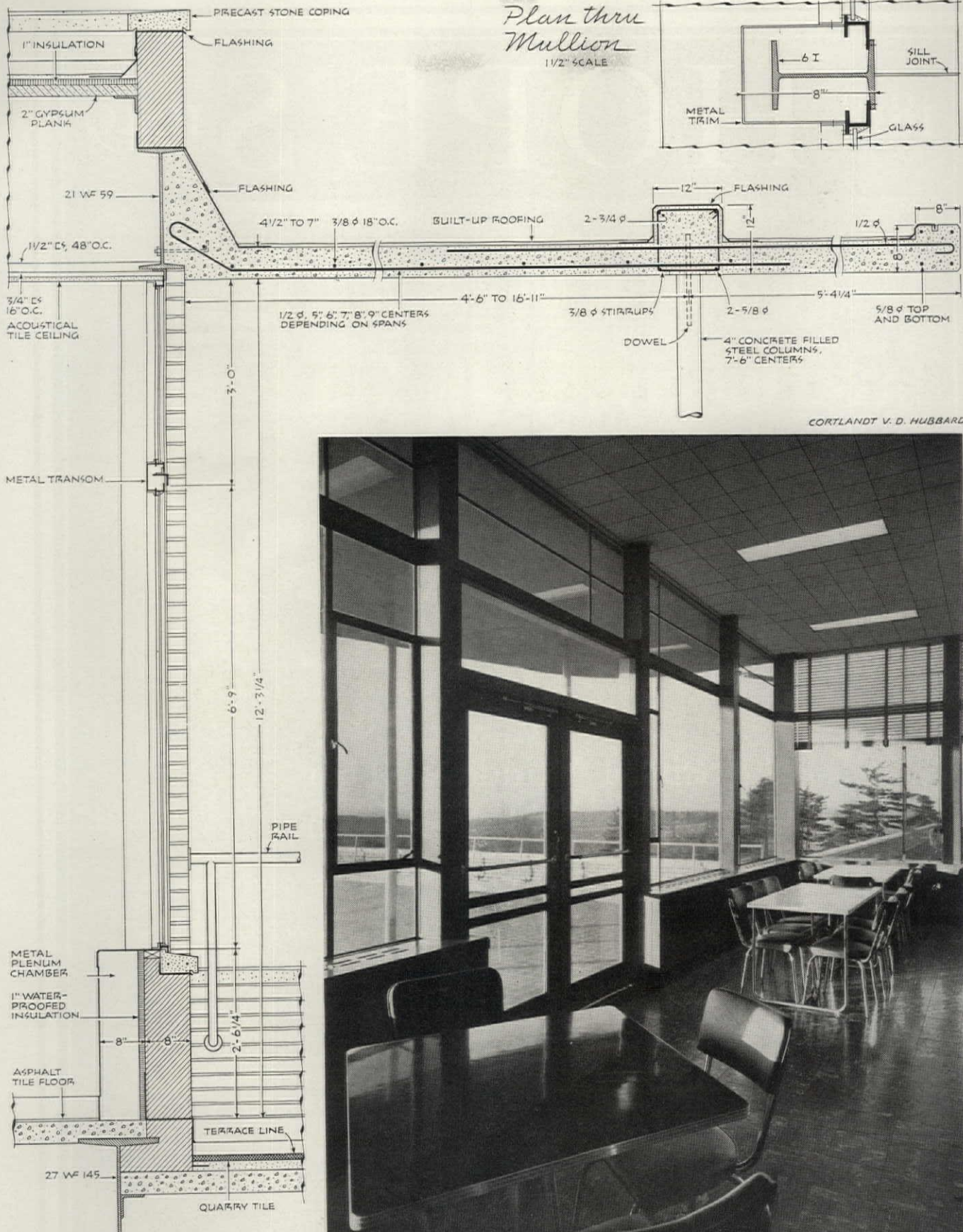
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1818 HOPE'S 1949



*Junior High School, South Euclid, Ohio. Architect: Charles Bacon Rowley & Associate, Inc.
General Contractor: Leo W. Schmidt Company*

School Windows That Improve Child Health

Every architect knows the comfort of raising his eyes from the drawing board to a long view through a clear window.

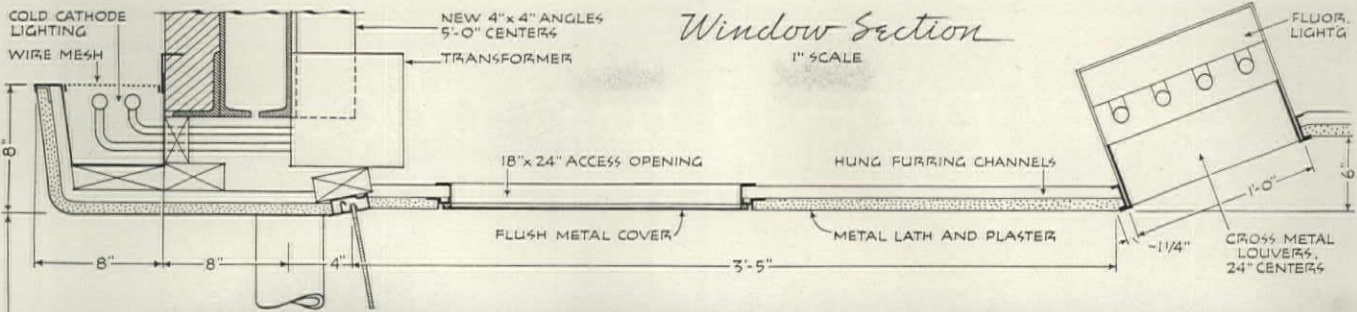
Now, thoughtful investigators of child health have included among the necessities of interior design, if a school is to produce a superior health record for its pupils, (1) opportunity for the restfulness obtained by changing to distant vision along with natural daylighting (2) good handling of the brightness pattern and (3) well controlled natural ventilation.

Hope's Steel Windows give you all these advantages at the start, when you are planning a layout of school room fenestration. Always of interest to school administrators, also, is the fact that steel school windows cost less than any other windows giving the same benefits.

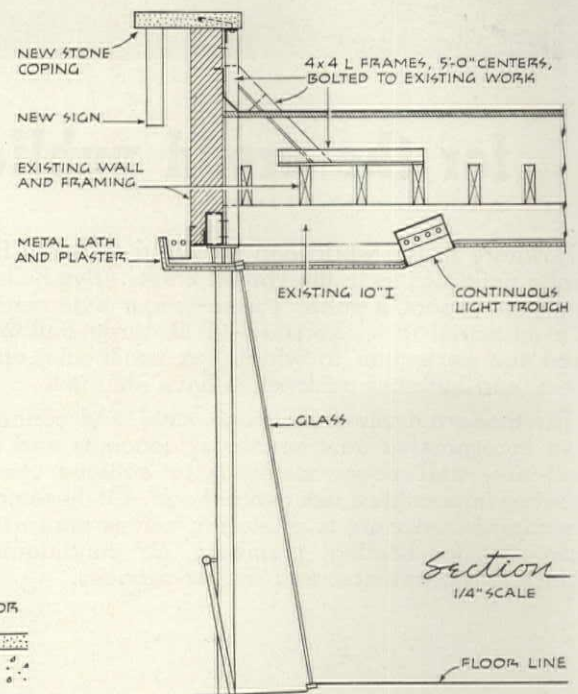
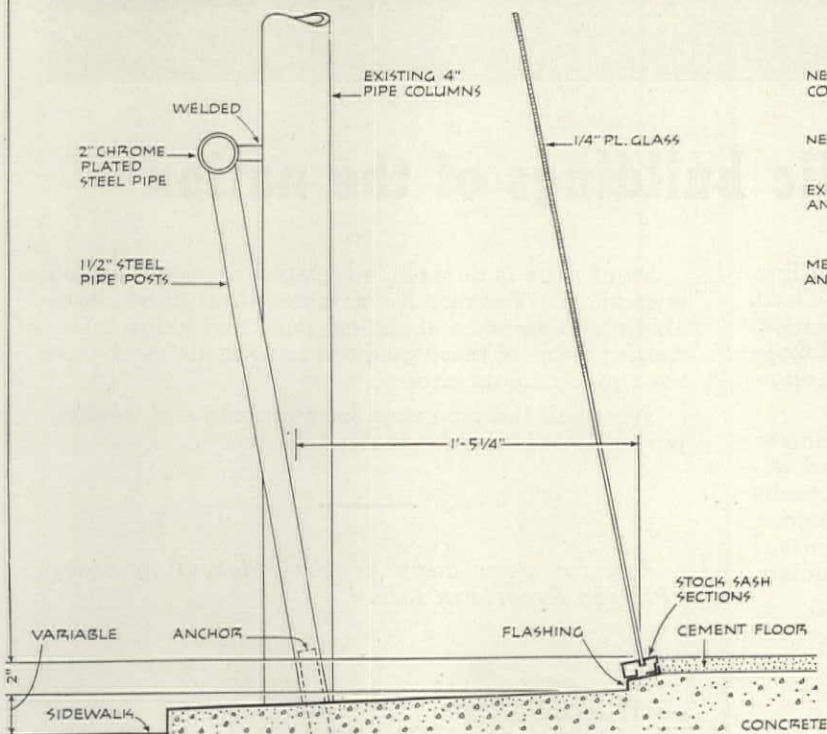
The experience of Hope's Engineering Department, who have taken part in hundreds of successful school window installations, is at your service. You are earnestly invited to write for Hope's Catalog.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS



GOTTSCHO-SCHLEISNER



"L" MOTORS
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MORRIS LAPIDUS
Architect



Steel pipe is first choice

for the proud public buildings of the nation

Nowhere in the world can be found so many fine public buildings as in the United States. Symbolized by a state capitol, a public auditorium, a civic center, or a memorial to a cherished ideal, these buildings attest the perfection to which our architects, engineers, and building contractors have attained.

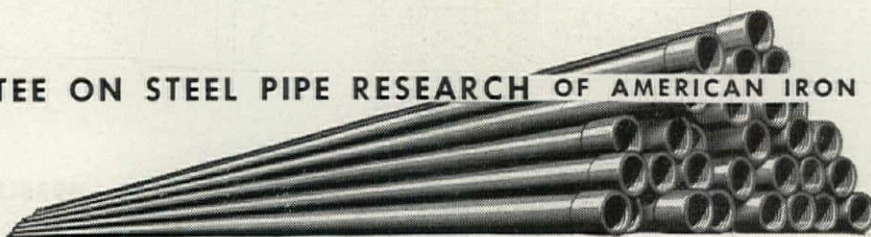
The modern dreamers in stone, steel, and concrete have incorporated new functional concepts and utilized new and better materials to achieve results believed impossible a half century ago. Of these none has contributed more to utilitarian values than *steel pipe* . . . for heating, plumbing, air conditioning, electrical transmission, and similar services.

Steel pipe is durable, adaptable, serviceable and economical. Because it combines *all* of these desirable characteristics, technical men who judge materials in terms of these qualities have made steel pipe their predominant choice.

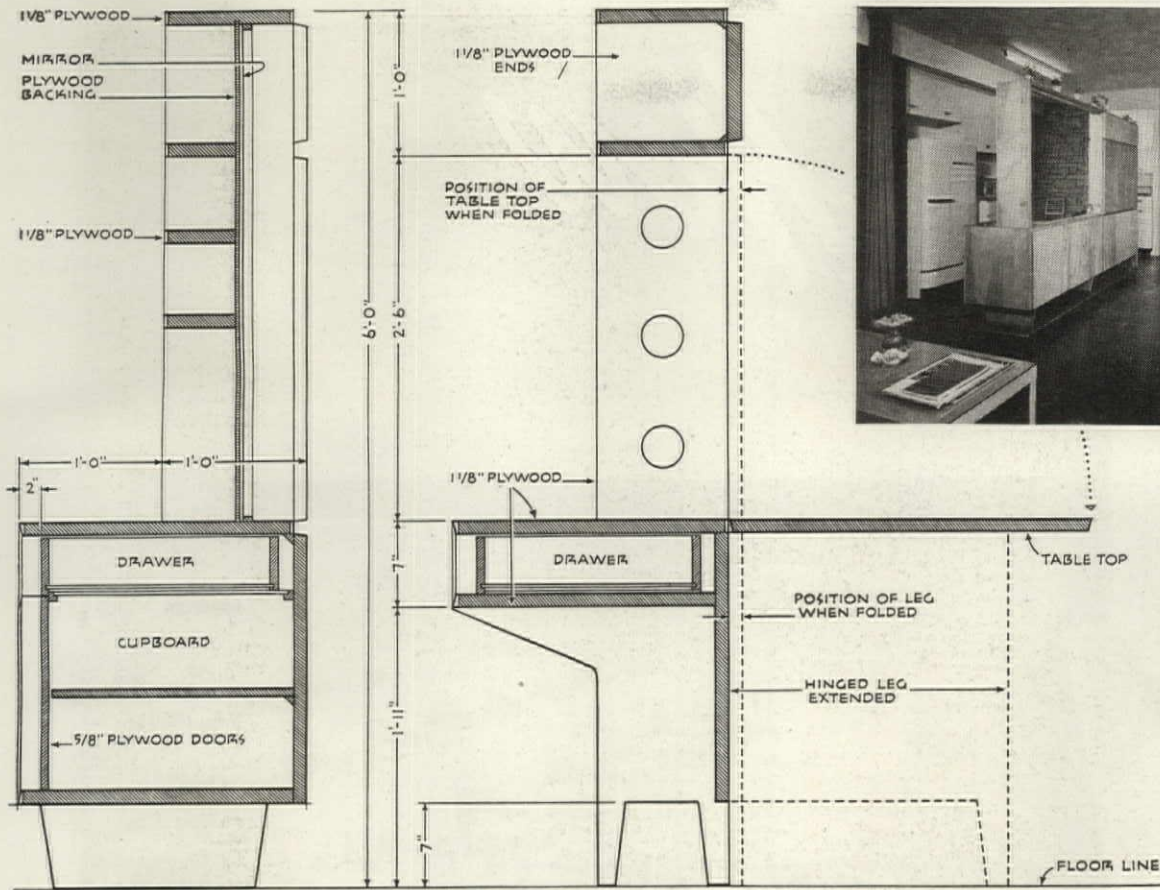
Yes, of all the pipe used for plumbing and heating purposes—*steel pipe is first choice!*

Ask for your copy of the interesting story "Pipe in American Life."

COMMITTEE ON STEEL PIPE RESEARCH OF AMERICAN IRON AND STEEL INSTITUTE

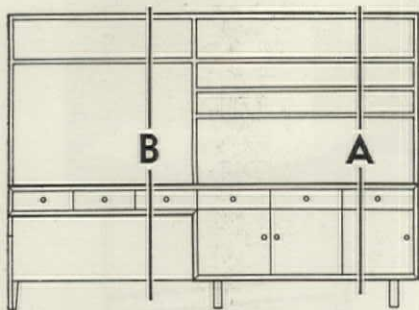


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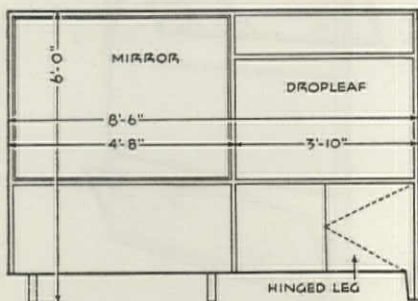


Section A 3/4" SCALE

Section B



Elevation KITCHEN SIDE 1/4" SCALE



Elevation LIVING ROOM SIDE

RICHARD GARRISON PHOTOS



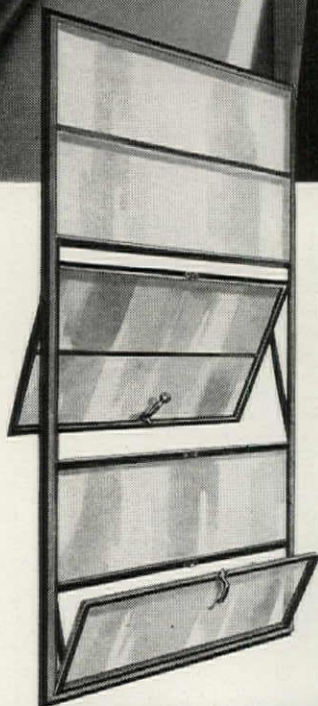
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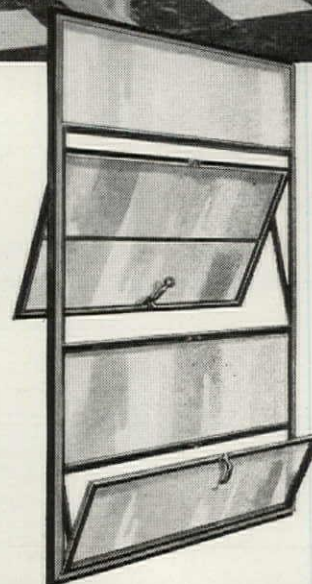


Schmidt and Paolinelli, Architects



INTERMEDIATE PROJECTED—1. Built-in weathering is integral with window sections. 2. When glazed, all glass is in same plane. 3. Frame section has $\frac{1}{2}$ " return on inside, permitting plastering and still providing space for attaching blinds and shades. 4. Extra strong—frame section is $1\frac{1}{2}$ " deep and ventilator section is $1\frac{3}{8}$ " deep. 5. Treated with Bondrite process.

ARCHITECTURAL PROJECTED—1. Same type of controlled ventilation as with Intermediate but more economical. 2. Frame section has similar $\frac{1}{2}$ " return on inside. This provides space for attaching window accessories. 3. Extra strength provided in frame— $1\frac{3}{8}$ " deep. Ventilator is even heavier— $1\frac{1}{2}$ " deep. 4. Treated with Bonderite process.



In construction products **CECO ENGINEERING**

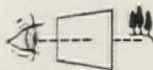
the Best Lighting for Schools



Consider the superiority of natural daylight . . . Our bodies and minds, in the main, evolved outdoors. In the recent dim past, man came inside. But since the eye evolved in natural daylight, it is just common sense that vision is best under daylight environment.



Investigate the availability of daylight in your area . . . It is important to know the amount of available daylight so you can plan for adequate illumination. The United States Weather Bureau records provide information showing the average number of clear days anywhere in the United States. For complete information, consult the United States Weather Bureau.



Explore the importance of distant vision . . . Medical science recognizes the importance of distant vision. Strain on the body, eyes and the mind is relieved through looking at distant views. Consult medical authorities for additional information on this important point.



Find out what type of window lets in the most daylight—assures distant vision . . . As a preliminary aid, consider these facts . . . steel windows admit more daylight than any other type of window design since they employ clear glass. Full height steel windows also provide more distant vision than any other window opening. There is less obstruction since frames and muntins are slender.



Determine what type of window gives the best ventilation . . . Steel windows provide more controlled ventilation than any other type of window opening. In fact, up to 100%. Stray breezes are captured and distributed all over the room. Drafts are controlled. Steel windows assure the greatest amount of life-giving pure fresh air.



Compare costs . . . The cost of steel window daylighting will vary according to localities. But, broadly speaking, comparisons show other types of window design cost from 10% to 200% more. In addition, the cost of artificial illumination is reduced and mechanical ventilation is eliminated.



Write for Ceco data booklet . . . Consider the 6 points above on illuminating schoolrooms. Then, for complete data, write Ceco for FREE descriptive booklet entitled "Better Environment Through Daylighting in Schools." The booklet covers other important subjects such as—Light Reflectance, Seating Arrangement, Light Control, Building Positioning.

**BETTER LIGHT . . .
BETTER SIGHT . . .
BETTER HEALTH . . .**

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METAL RESIDENCE CASEMENTS • INDUSTRIAL WINDOWS AND DOORS
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technical press

By JOHN RANNELLS



the architect and planning

A meeting of the Architectural Association in London last March examined the status of planning very thoroughly. (*Architectural Association Journal*,

April 1949). The discussion was limited to physical planning, for they all admitted that economic planning above, say, the county level is beyond the

province of the architect. They have a tremendous amount of town and country planning to do in England and they know by now that the routine of surveys and colored maps isn't enough. There must be a three-dimensional grasp that only the architect, as a rule, brings to the problem, and every physical planning problem is the province of the architect. His training in control of space makes him the one professional equipped to give shape to the solutions worked out by the planning team.

As always in these British meetings and the reporting of them, the discussion developed ideas that were only suggested by the speaker. The relationship of professionals to public in the carrying out of the Town and Country Planning Act was explored. The greatest difficulty yet to be solved is education—especially education of the public, who can demand the best and support progressive programs only if they know the score.

Of course, it's the same in this country. Techniques can't thrive if they are isolated and technicians can't put their ideas across unless they make sense to the customers.

data for hospital planning

Everybody is getting into the act—the Hospital Survey and Construction Act, that is. Latest is General Electric with the *Hospital Handbook For Architects and Engineers* (General Electric Co., Schenectady, N. Y. About 270 pp., color-tab index. \$19.75). It's a big, handsome volume compiled by the various G-E departments and affiliates in 10 separate sections, each offering advice and promoting its own line of products and (most useful of all) listing all the local field representatives with whom the architects and engineers can work.

Biggest and best is the X-ray section. A good general discussion of a typical X-ray department and each room in it includes detailed discussions and illustrations of each item of equipment, together with the necessary wiring and X-ray protection. The plans suggested by the U.S. Public Health Service Division of Hospital Facilities for various types of health centers and hospitals are all reproduced with the appropriate G-E X-ray equipment and wiring added in color. The illustrations, both photos and dimensioned line cuts, are very complete and clear. The section ends with a check-list review of factors which affect plans for the hospital



THE BARCOL OVERdoor

WITH ELECTRIC OPERATOR

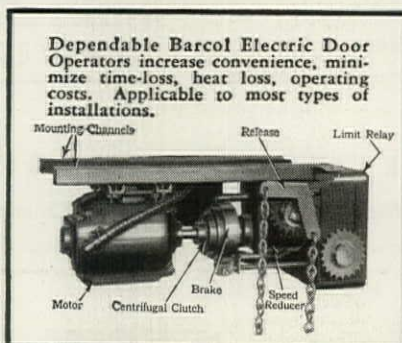
FOR PUBLIC GARAGE SERVICE ENTRANCES

Barcol OVERdoors and Barber-Colman Electric Door Operators are the ideal combination for openings in public garages, automobile agencies, service stations, and other establishments where traffic is heavy. They operate easily, quickly, efficiently . . . provide convenience and valuable time-saving both to garagemen and their customers.

Only Barcol OVERdoors offer all these distinctive features: exclusive cam-controlled action for weathertight closing without sticking or binding; tailored twin-torsion springs for safe, accurate counterbalancing; and continuous vertical track brackets for strength and durability.

Couple these features with quality construction and guaranteed installation by factory-trained representatives and you have doors that give dependable, trouble-

free service at lowest maintenance cost. Barcol OVERdoors are adaptable to existing buildings as well as new construction. Consult your Barcol representative for complete details.



Consult classified directory for local Barcol representative.

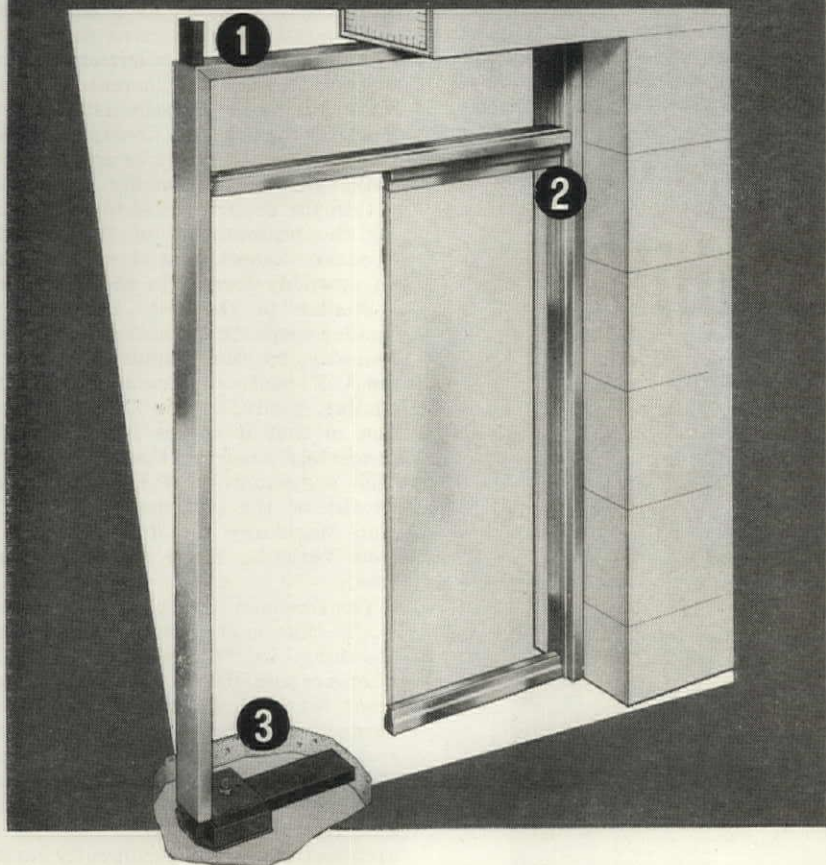
FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES in PRINCIPAL CITIES



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100 MILL ST. • ROCKFORD, ILLINOIS

(Continued on page 104)

NOW...a doorway that has everything!



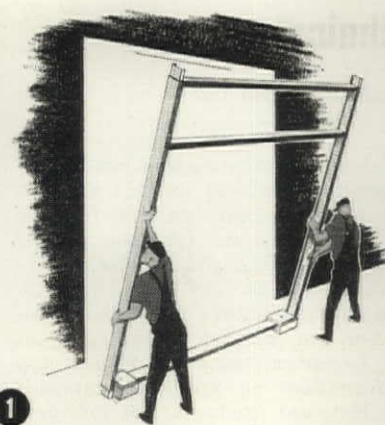
WITH the new Pittsburgh Doorway you don't even need a screw driver; there's no drilling of holes in the frame. And there's nothing to assemble. You just unpack the frame, bolt it into the building opening, and hang the massive Herculite Tempered Plate Glass Doors—for which the frame is especially engineered. Everything is in one "package"—the famous Pittco Checking Floor Hinge, moldings for transom glass, supports for sidelights, strikes for locks, sockets for bolts, *everything!* No time-consuming calculations. No worries about setting and fitting. But this is only a small part of the story. For complete information, why not fill in and return the coupon? There's no obligation.

Pittsburgh DOORWAYS



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY



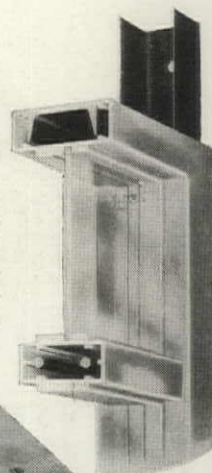
EVERYTHING IN ONE PACKAGE

Pittsburgh Doorways reach the job, ready for bolting into the opening. Twelve standard designs are available which, singly or in combination, will fit any job.

2

STURDY, HANDSOME FRAME

Fabricated of extra-heavy extruded aluminum, highly polished and anodized. It's reinforced with steel channel and tie rods, as partially shown here.



PITTCO CHECKING FLOOR HINGE

Only $6\frac{1}{4}$ " x $6\frac{1}{4}$ ", it is an engineering marvel. Has positive door-speed control, separate checking control, built-in hold-open feature. It's sealed in oil for life.

Pittsburgh Plate Glass Company
2284-9 Grant Building, Pittsburgh 19, Pa.
Without obligation on my part, please send me a FREE copy of your booklet on Pittsburgh Doorways.

Name

Address

City State

technical press

(Continued from page 102)

X-ray department, rounding out a very satisfactory handbook on this subject.

The other sections do not fare so well. Hotpoint, Inc., for example, is content with listing and illustrating its products which fit into the U.S.P.H.S. typical kitchen plans; there is no information on kitchen planning generally, except a vague discussion and no information on kitchen equipment except Hotpoint products. For refrigerators or freezers one must turn to the

Appliances and Merchandise Department (up to 10 cu. ft.) or to the Air Conditioning Department for large reach-in boxes or walk-in refrigerators. The discussion of air conditioning is very good. The Apparatus Department does a sound job presenting the power distribution picture and adds complete specifications for use. Secondary distribution systems are covered by a G-E affiliate—the Trumbull Electric Manufacturing Co., while the Construc-

tion Materials Department covers wiring systems and equipment very briefly. Telechron, Inc., has a separate section, as has the Chemical Department, which boasts but one product—Textolite—suitable for counter tops, push plates, and the like.

The Lamp Department, one of G-E's most important and most influential, has a big section on lighting but as they have no fixtures for sale they cover by furnishing a Buyer's Guide of available fixtures as a supplement.

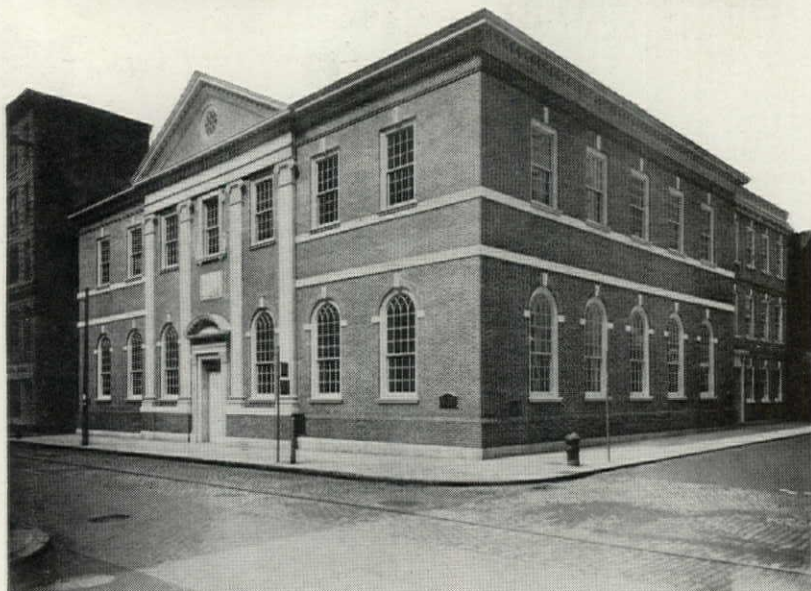
All in all there's a great deal of useful data in this collection, pointed specially toward the increase in building, which will be stimulated by the Hospital Survey and Construction Act. But it does not add up to an integrated book. That would hardly be possible within the departmental format chosen for the presentation of the material. Goodness knows why they chose such an unwieldy format in the first place!

Similar to the G-E Handbook, in smaller scope, is *Planning the Hospital Laundry*, by the Laundry Division of the U.S. Hoffman Machinery Co. It is similar, really, to the G-E X-ray section in that it covers its own subject completely, showing the equipment for each suggested U.S.P.H.S. layout and details of the equipment (U.S. Hoffman Machinery Co., 105 Fourth Ave., New York, N. Y. 30 pp., paper-bound, free).

The Eastman Kodak Co., of Rochester, N. Y., has contributed the same sort of thing in "Planning the Medical Photographic Department," reprinted from the Nov. 3, 1948 *Medical Radiography and Photography*. This material is more generally useful in that the needs are given in terms of space for various functions and equipment and number of workers so that the architect can plan intelligently himself without quite so much emphasis on stock plans. The stock plans given in this article are very good, however. They are available on separate sheets at eighth-scale to aid in determining space requirements.

It must be quite a puzzle to the big manufacturers—how to apportion their technical advertising outlay. The obvious first concern, after keeping their names on constant display, must be to put material in the hands of architects and engineers and administrators which will be valued for its usefulness and kept at hand. Presumably, everybody has Sweet's, plus odd catalogs, so the next step is toward further education of the professionals through general articles and manuals and handbooks, with benefit to all concerned. This idea is very well put in the first page of the X-ray section of the Hospital Hand-Book: "Admittedly, the General Electric X-ray Corporation has a selfish interest in seeing that the equipment which it sponsors is properly installed, so that the most satisfactory service will be obtained." That's constructive promotion. The news release for the handbook states that the book is a "nonpromotional text." That's a puzzle.

Marble for Stability



Real Estate Trust Company, Philadelphia, Pa.
Highland Danby Marble Exterior Trim, Sidney Martin and Associates, Architects,
John P. Hallahan Co., Contractor.

Today, the architect and owner should give even more careful consideration to the building material they employ. They should choose wisely, with an alert eye to stability, beauty, and low maintenance.

Vermont Marble is the answer. Whether to enhance entire exteriors with monumental character, or for the embellishment of structural materials, marble is unsurpassed. In either the interior or exterior phase of the building program marble most effectively embodies:

"Color • Character • Permanence • Low Maintenance"

Those structures which serve a purely monumental purpose, public or private, will also benefit by the stability, economy, and crystalline beauty of Vermont Marble.

VERMONT MARBLE

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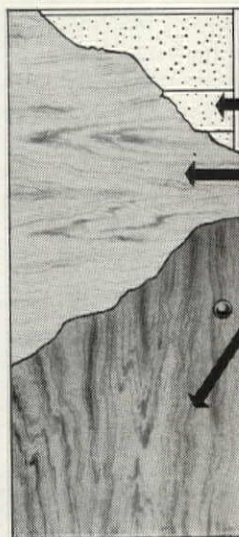
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MINERAL CORE

Strong, light, fireproof material. Great dimensional stability.

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Of 1-16" veneer is bonded to core with waterproof Tego-Film glue.

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Is birch. Other decorative woods available on special order.

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BOOKS

SCHOOL STANDARDS

Guide for Planning School Plants. *National Council on Schoolhouse Construction.* May be purchased from the office of W. D. McClurkin, Sec'y-Treas., George Peabody College, Nashville, Tenn. \$1.25

The standards published annually (with some interruptions) by the National

Council on Schoolhouse Construction have influenced school design for about 20 years. In some states these standards have been incorporated into legal regulations or required standards of design. Because of the authority exercised by this publication, most of the architects who do a considerable volume of school work, until recently, awaited this annual appearance with

some apprehension. The 1946 tentative Guide embodied a changed philosophy compared to previous issues in regard to the establishment of standards, and this year's Guide continues with the same point of view. The current publication will deserve a warm welcome by forward-looking school architects.

The Council's older Guides tended to the practice of establishing dimensional and area standards with recommendations as to window sizes, building orientation, and other absolute and inflexible prescriptions for school designers. Improvement in quality and performance of school plants, and experimentation in design were not encouraged by such an approach to school planning problems.

This year's Guide and the immediately preceding 1946 Guide have adopted an outlook which will be helpful to creative architects. The emphasis is on objectives and performance standards which are analyzed competently. The book rightly assumes, I think, that when problems are completely understood, the first step towards a high quality solution has been taken. The Guide does not confine itself exclusively to building design matters but deals with such questions as procedures, policies, the selection of an architect, and school plant safety. Architects will be glad to know that full recognition is given to the value of competent architectural service.

It is difficult when writing such a Guide to maintain a general approach, to state problems and objectives, and yet to sustain strength and conviction in recommendations without becoming so unfortunately specific as to deter original thinking. For example, the article on "Visual Comfort and Efficiency" of Chapter VIII does this admirably. This subject is discussed so as to define clearly what constitutes a well-lighted room without once recommending a specific orientation, window arrangement, ceiling height, or lighting fixture. It invites the architect to find his own right solution. No architect who designs public school buildings should be without this year's Guide.

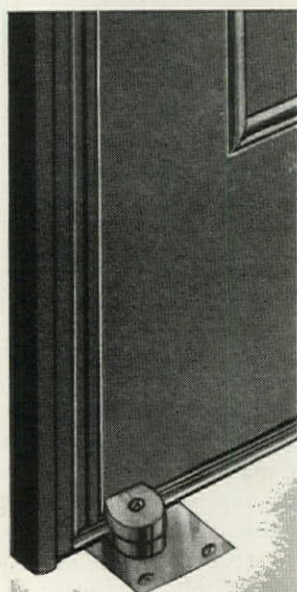
The following list of chapter headings gives an idea of the range of subject matter: "The Plant Program," "Sites," "The Elementary School," "The Secondary School," "The Community School," "General Facilities," "School Plant Safety," "Service Facilities," "Acoustical, Audio-Visual, and Custodial Facilities."

JOHN LYON REID

STAND-BY REISSUED

Architectural Specifications—How to Write Them. 2nd Edition, 1948. Gold-

(Continued on page 108)



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Ideal Concealed Control for Any Interior Door

At a cost comparable to ordinary treatment.

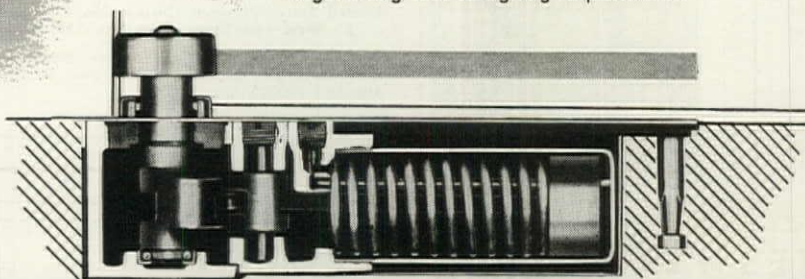
Compactness and clean-cut beauty immediately characterize the Rixson Uni-Check—sturdiness and long-dependable, automatic operation distinguish its hidden qualities.

Available in four spring capacities, with only six movable parts, the Uni-Check is ideal for any interior door from 2'8" or less to 4' wide. Dimensions are only 10 11/16" long x 2 9/16" high. Door mounted directly on the Uni-Check.

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Freedom unlimited! That's what Curtis sectional kitchen units mean in planning any size or shape of kitchen for step-saving convenience. What's more, you can plan exactly the color scheme that suits the owner's taste. For these wood cabinets come prime coated in white—one finish coat of any desired color completes their decoration and satisfies the housewife.

Curtis kitchen units are made like fine furniture—for durability and easy maintenance. They are quickly and easily installed, not only in homes, but in institutional and commercial buildings as well—schools, churches, hospitals, hotels, restaurants, etc. Wherever storage space is required, you'll find the problem solved with Curtis cabinets.

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(Please check.)

Reviews

(Continued from page 106)

win Goldsmith. *American Institute of Architects, 1741 New York Ave., N.W., Washington 6, D.C. 134 pp. \$5.00*

Within the last few months, this is the second book in the specification field to be published by the American Institute of Architects. The Institute is to be lauded for its continuing efforts to improve specifications. The first edition of the book was published in 1935. It enjoyed wide circulation then and in the

ensuing years, as will undoubtedly this revised second edition. Professor Goldsmith, with pedantic skill, hews unwaveringly to the "how to write architectural specifications" theme.

The book contains 20 informative chapters which analyze every detailed facet of the mechanics of specification writing. Chapter titles include, among others, such subjects as Qualifications for Specification Writing, Preparatory Systems, Organization by Trade Sec-

tions, Arrangement of Subheads and Subject Matter, Index System, How to Write Specification Clauses, General Conditions, Pertinent Points, Streamlined Specifications.

The student will enjoy its orderly presentation, as will any practicing architect. B.J.S.

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BUILDING WITH IRON

A History of Cast Iron in Architecture. John Gloag and Derek Bridgwater. Published by George Allen and Unwin, Ltd., London, England; distributed in the U.S. by the Macmillan Co., 60 Fifth Ave., New York, N.Y. 1948. 395 pp., illus., color plates. \$18.00

Until the publication of Sigfried Giedion's *Space, Time, and Architecture* in 1941, buildings of the Victorian Period were usually dismissed, in enlightened circles, with humorous allusions to jigsaw art. Of late years, however, appreciation of that remarkable age and its structures has been growing. The handsome new Gloag and Bridgwater volume adds a great deal to the historical and critical writing on the subject.

The authors trace the use of iron from prehistoric times. Of relatively recent record, cast iron in England can be first dated from early grave slabs and firebacks of that material. Modern foundry practice began in the early 18th century when Quaker Abraham Darby of Coalbrookdale first smelted with coke rather than charcoal. As the skill of the ironmakers developed, the quality of the product improved, the price came down, and use increased correspondingly. The first monument of the founder's art was a cast-iron bridge designed by a Shrewsbury architect named Pritchard and erected over the Severn River in 1779. Major employment in buildings began in 1801 with a Manchester cotton mill, seven stories high, which had interior cast-iron columns and beams throughout. It was widely copied as a model and, as technical progress was made in the study of beam sections, the design was gradually improved.

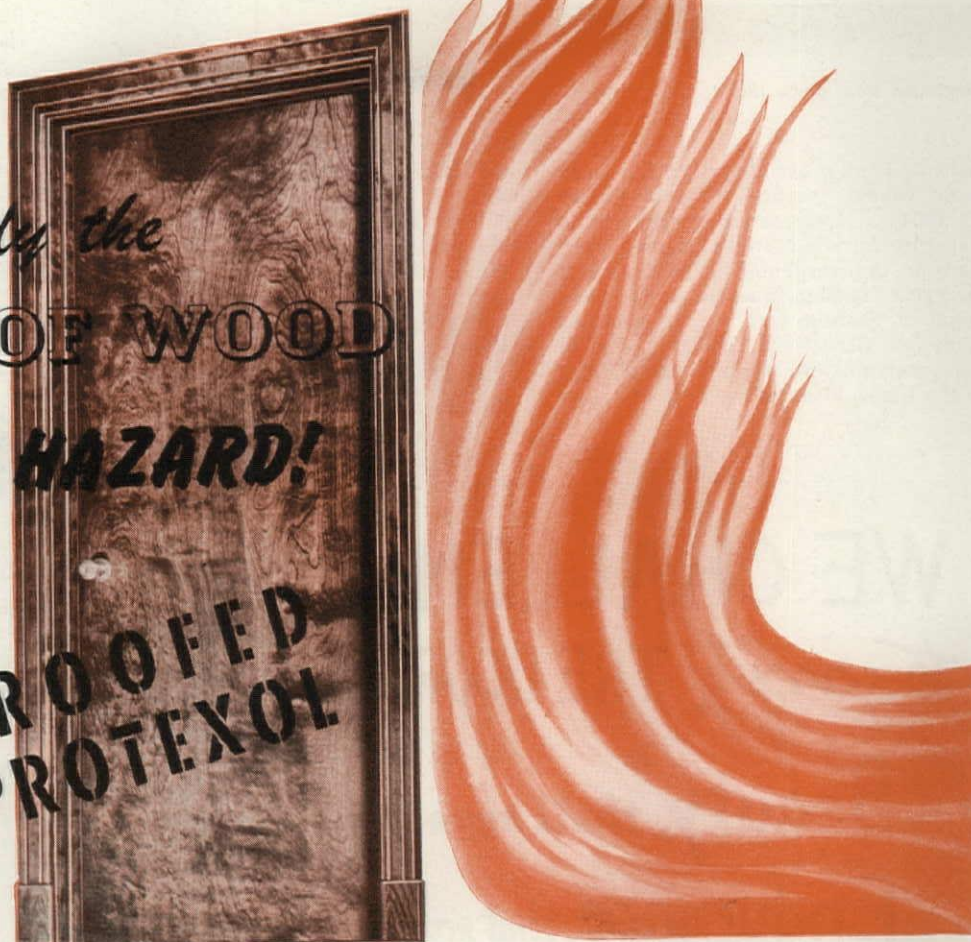
The decorative possibilities of molded iron also were appreciated, and it was used for railings as early as the great enclosure around St. Paul's Cathedral in 1714 (although not approved by Architect Wren). James Gibbs, however, found it suitable for use on some of his important works, as did Robert Adam. The Royal Pavilion by John Nash, on the shore at Brighton, built largely of cast iron in a spectacular Oriental manner, did much to prepare public taste for the stylish decorators of the Victorian Period. The middle of the century saw the boldest develop-

(Continued on page 110)

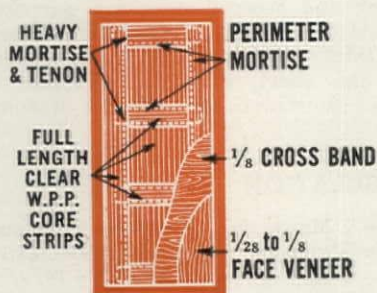
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Reviews

(Continued from page 108)

ment and the great climax of the story is, of course, Paxton's Crystal Palace of 1851, a tremendous prefabricated structure for which iron and glass were made in unprecedented quantities. But the great freedom inherent in the technique of casting iron led to excesses in design. Structural accidents, due to the uncertain and variable metallurgy of the times, also did much to discredit

the material, as steel began to supersede it.

The book closes with a section on the modern uses of cast iron with the frank intention of reviving its former popularity. We could hope that designs will progress well beyond the examples shown.

A good assortment of sources is used in the footnotes to the text and the

illustrations—there are over 500 of them—are particularly fine. Many are taken from original working drawings and from contemporary views of completed works. Little is said about iron in the United States, where it likewise has had a long and interesting history. Only two architectural examples are illustrated—the New York Crystal Palace and the facade of the Gantt Building on the St. Louis riverfront, now a part of the huge architectural collection preserved and stored there by the National Park Service. It is time that an American volume were published; for in this country the use of structural iron finally evolved into the architectural steel skeleton, one of the most spectacular inventions of all time.

CHARLES E. PETERSON

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ELEPHANT'S TRUNK

Contemporary Danish Architecture. Esbjørn Hjørnt. Distributed by Scandinavian Book Service, Box 99, Audubon Sta., New York 32, N. Y., 1949. 108 pp., illus. \$2.95

This reviewer had the same sensation reading *Contemporary Danish Architecture* as one of the legendary five men describing an elephant. Architecturally, this is the trunk. It is a good beginning on what obviously is a large subject. Hjørnt confines himself to discussing nine building types that illustrate Danish architectural trends during the last 15 years. Because custom, war, and climatic limitations have had a retarding influence, the architecture shown is conservative. The author succeeds in making the reader want to know more about Danish architecture and see more examples of it, for his treatment almost exclusively pertains to materials: the traditional brick and the more modern reinforced concrete. Heating, construction details, furnishings, and other factors are purposely omitted for brevity. Perhaps the best, certainly the most interesting, chapter is the short, historical synopsis on brick construction. HELEN MERCNER

INSULATION

85% Magnesia Insulation Manual. The Magnesia Insulation Manufacturers Assn., Washington, D.C. 1949. 90 pp., illus., tables, index.

The trade associations seem to put out the best literature. The individual manufacturers are naturally pushing to sell their stuff quick but the association can take a steadier view, giving information and service and building up confidence and good will among the customers.

This manual is a model of clear information—the hows and whys (including the economics so important to engineers) of high-temperature insulation. Installation and maintenance practice is illustrated by clear line cuts and photographs of all sorts of jobs—a

(Continued on page 112)



WHY SHOULD INSULATION HAVE AN INTEGRAL CONTINUOUS VAPOR BARRIER ?

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Reviews

(Continued from page 110)

good thing for architects to look at, if only to get the picture in their heads that the little dots and fitting symbols on the heating plans may become big fat cylinders and strange bulky shapes taking up a lot of space in the building.

ALUMINUM STRUCTURAL DESIGN

Technical Service, Reynolds Metals Co.,
2500 S. Third St., Louisville 1, Ky.,

1949. 124 pp., illus. Sent without charge to architects, engineers, designers, and firm officials requesting this publication on their firm letterhead.

The purpose of this handbook is to enable one to design an original structure of aluminum, or to convert an existing structural design from some other material to aluminum.

The discussion is broken down into chapters on the computation of tensile,

compressive, bending, and shear stresses, as well as stresses in cylinders subjected to fluid pressure. A section is devoted to fabricating considerations and joining methods, including riveting, bolting, fusion welding, and spot welding. Additional chapters cover deflection and vibration problems. Tabular matter, formulas, and examples are exceptionally complete. B.H.H.

EXHAUST SYSTEMS

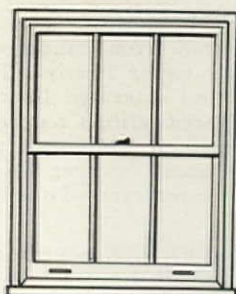
Design of Industrial Exhaust Systems for Dust and Fume Removal, 2nd Edition. John L. Alden. The Industrial Press, 148 Lafayette St., New York, N. Y. 252 pp., illus. \$3.50

Ordinary ventilation practice doesn't cover the industrial problems of dust and fume removal at all. This book shows how to design, build, or buy exhaust systems for removal of dust, shavings, fumes, etc. The same principles are applied to pneumatic conveying of lightweight bulk materials such as grain. The illustrations are very clear and thorough. J.R.

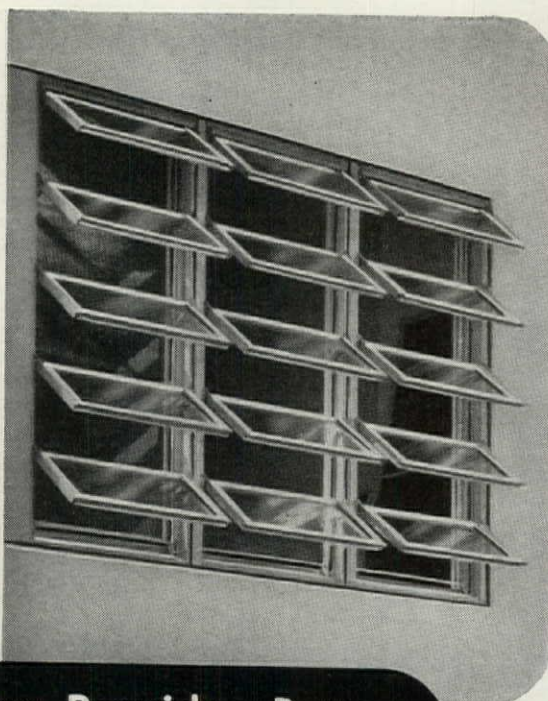
STEEL AND TIMBER

Elementary Structural Problems in Steel and Timber, 3rd Edition. C. R. Young and C. F. Morrison, John Wiley & Sons, Inc., New York, N. Y. 329 pp., \$4.50

A general text for structural design of buildings and bridges in steel and timber with very completely worked-out examples of a variety of problems. The chief revision in this edition is in the coverage of timber engineering. The authors are dean of the faculty of applied science and engineering, and associate professor of civil engineering at the University of Toronto. J.R.



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FILM

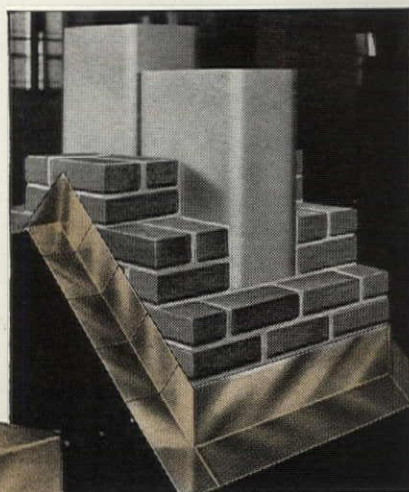
PIPE LINES

Underground Arteries—The Story of Transite Pipe. Johns-Manville, 22 E. 40th St., New York 16, N. Y. Color sound film. Information on bookings available from Johns-Manville.

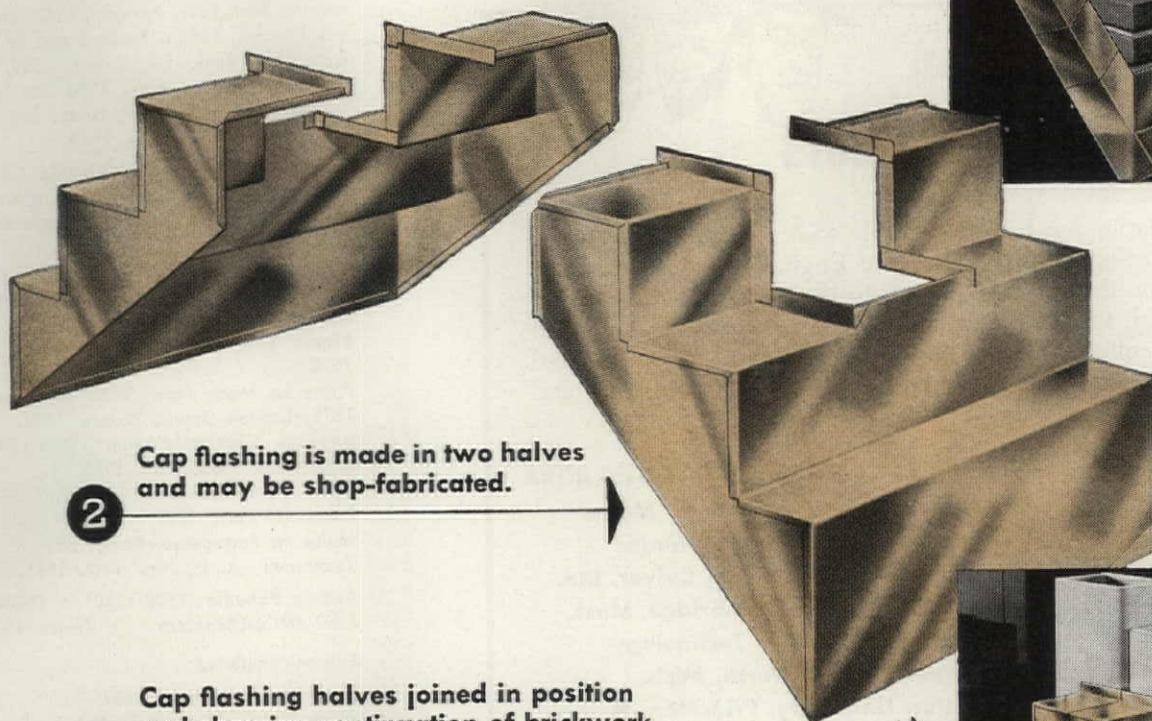
This 32-minute full-color film begins with scenes illustrating the importance of fresh water in the daily life of a typical community; moves into a general discussion of supply and distribution lines; then, more specifically, introduces Johns-Manville's Transite Pipe. Steps in the manufacture of this asbestos-cement pipe and installation features are shown. The film is available to technical societies, organizations, and lay groups. M.W.K.

Here's a leakproof flashing design that's practical

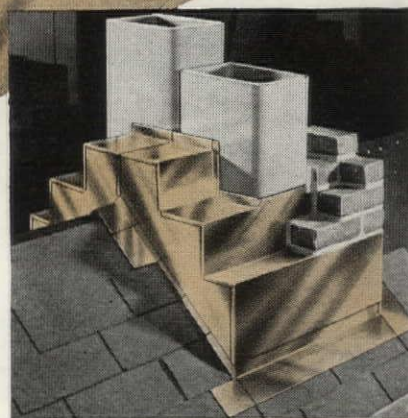
1 Base flashing in position with brickwork ready to receive cap flashing.



2 Cap flashing is made in two halves and may be shop-fabricated.



3 Cap flashing halves joined in position and showing continuation of brickwork.



Here's a chimney flashing design you will find useful. You may wish to pass it on to your draftsman or keep it in your file for future reference. It's a design that *can't* leak.

As the illustration indicates, the cap flashing is made in halves which are joined in position by a simple lock seam. Detailed drawings for flashing both center chimneys and outside chimneys are available. We shall be glad to supply them to you on request. Write to The American Brass Company, Waterbury 88, Connecticut. In Canada: Anaconda American Brass, Ltd., New Toronto, Ontario.

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Reviews

(Continued from page 112)

Books and Buildings: 1449-1949

100 Great Architectural Books most influential in shaping the architecture of the Western World, exhibited in the Sterling Memorial Library, Yale University, February 22-March 16, 1949. Selected and arranged by Carroll L. V. Meeks.

A. FIFTEENTH CENTURY

- 1) Leone Battista Alberti (1404-1472). *De Re Aedificatoria Libri Decem*, Firenze, 1485 (composed 1449 ff.)
Editions exhibited: Paris, 1512. Strasbourg, 1541. James Leoni: London, 1726 and London, 1755. Bologna, 1782.
- 2) Vitruvius, *De Architectura Libri Decem*, First published in Rome in 1485.

Editions exhibited: Italian translation by Barbaro, illustrations by Palladio, Vinegia, 1556; Rusconi, Venice, 1590; Perrault, Paris, 1684 (second edition); Perrault, abridged, London, 1692, 1703; Wilkin's, London, 1812; Morgan, Cambridge, 1926; Essen, 1938

also exhibited:

Leonardo DaVinci (1452-1519). Photograph of model constructed from his manuscripts.
Villard de Honnecourt (thirteenth century), Facsimile, Paris, 1906.
Colonna, Francesco, *Hypnerotomachia Poliphili*, Venice, 1499

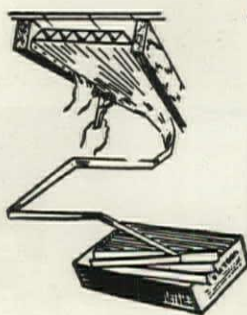
B. SIXTEENTH CENTURY

- 3) Sebastiano Serlio (1475-1552). Editions exhibited: *Regles Generales de l'architecture*, Book Four, Antwerp, 1542. Books 1-5 [Venice, 1551]. Books 3 and 4, Toledo, 1552. Books 1-5, Venice, 1559, 60, 62. Books 1 and 2, Paris, 1590. The first, second, third and fourth books, London, 1611. Books 1-7, Venice, 1619.
- 4) Giacomo Barozio called Vignola (1507-1573): *Regola dei Cinqui Ordini d'Architettura*, Rome, 1563. *Le due Regole della prospettiva*, Rome, 1583.
Editions exhibited:
Regola de Cinque Ordini, . . . [polyglot] Amsterdam, 1642.
Regola delli Cinqui Ordini, Rome, ca 1650.
Pierre Le Muet, Paris, 1632; Nuernberg, 1675; London, Joseph Moxon, 1694.
Augustin Charles d'Aviler (1653-1700), Amsterdam, 1699; Paris, 1720.
Cours d'architecture . . . , Paris, 1738.
Babel, (?) Paris, 1767.
Moisy, in Portuguese, Paris, 1885.
Tuckerman, A. L., New York, 1891.
- 5) Andrea Palladio (1508-1580): *I Quattro Libri dell'Architettura* . . . , Venice, 1570.
Editions Exhibited:
Le Muet, Amsterdam, 1682.
Ware, (first edition in English by Leoni, 1715) London, 1738.
Hoppus, London, 1736; Paris, 1842.
Gurlitt, Berlin, 1914.
Cabiati, [Milan, 1945].
- 6) Jacques Androuet du Cerceau (1510-1585): *Les Plus Excellents Bastiments de France*, Paris, 1576-1579.
Philibert Delorme (1515-70): *Nouvelle Invention pour bien bastir* . . . , Paris, 1561; Paris, 1567-68.
- 7) *La Premièr Forms de l'Architectiure de* . . . , Exhibited Paris, 1626.
- 8) John Shute (died 1563): *The First & Chief Groundes of Architecture* . . . , London, 1563; Exhibited facsimile, London, 1912.
- 9) Daniello Barbaro (1513-1570): *La Pratica della prospettiva*, Venice, 1569.
- 10) Domenico Fontana, (1543-1607): *Della Transportatione dell'Obelisco Vaticano*, Rome, 1743 (first published 1590).
- 11) Antonio Labacco (1495-1567): . . . *Dell'Architettura*, [Rome, 1559].

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Reviews

(Continued from page 114)

G. SEVENTEENTH CENTURY

- 12) François Blondel (1618-1686): *Cours d'Architecture*, Paris 1675-1683.
Francesco Borromini (1599-1667): *Opera del . . . Chiesa . . . della Sapienza . . .*, Rome, 1720.
Opera della . . . Oratorio . . ., Rome, 1725.
- 13) Roland Fréart de Chambray (d. 1676): *Parallèles de l'Architecture Antique et de*

la Moderne . . ., Paris, 1650.

John Evelyn, London, 1723.

- 14) Antoine Babuty Desgodetz (1653-1728): *Les Edifices Antiques de Rome . . .*, Paris, 1779; (First edition was Paris, 1682-3).

Antoine Le Pautre (1621-1682): *Oeuvres d'Architecture . . .*, Paris [1652].

Jean Marot (1619-1679): *Receuil des Plans, Profiles . . .*, Paris, 1676.

- 15) Claude Perrault, (1613-1688): *Ordonnance des Cinq Espèces de Colonnnes . . .*, Paris, 1684.

- 16) Andrea Pozzo (1642-1709): *Perspectiva Pictorum et Architectorum . . .*, Rome, 1693-1700.

- 17) Vincenzo Scamozzi (1552-1616): *L'Idea Della Architettura Unversale . . .*, Venice, 1615.

- 18) Sir Henry Wotton: *The Elements of Architecture*, London, 1624.

others exhibited:

Giovanni Battista Falda: *Li Giardini de Rome . . . 17th cent.*, Nuremberg [1690].

Iacobus Laurus: *Antiquae Urbis Splendor . . .*, Rome, 1612-1641. *Le Fontane . . .*, Rome, 1670-75.

Giambattista Montana: *Scielta da Varri Tempietti Antichi . . .*, Rome, 1624.

Jacques Perret: *Architectura et Perspectiva . . .*, Frankfurt, 1602.

D. GERMAN BOOKS

- 19) Paulus Decker (1677-1713): *Furstlicher Baumeister . . .*, Augsburg, 1711.

- 20) Wendel Dietterlein (1550-1599): *Architectura*, Nurnberg, 1655.

- 21) Johann Bernhard Fischer Von Erlach (1656-1723): *Entwurf einer historischen Architektur . . .*, First edition, Vienna, 1721; Exhibited Second edition, Leipzig, 1725.

- 22) Joseph Furstenbach (1591-1667): *Architectura Civilis . . .*, Ulm, 1628. *Architectura Universalis . . .*, Ulm, 1635.

- 23) Leonhard Cristoph Sturms (1669-1714): *Prodromus Architecturae Goldmannianae*, Augsburg, 1714.

- 24) Jans Vredeman de Vries (1527-1604): *Perspective . . .*, Lugduni Batavorum, [1604-1605].

- 25) Johann Joachim Wincklemann, (1717-1768): *Gedanken über die Nachahmung der Griechischen Werke . . .*, Dresden und Leipzig, 1756.

others exhibited:

Simon Bosboom (1614-1670): *Van de Vyt Colomen . . .*, Amsterdam, 1670; London, 1676.

Marot and others, *Suecia Antiqua et Moderna . . .*, [ca 1700].

Thurah, *Vitruvius Danicus*, Copenhagen, 1746-49.

E. EIGHTEENTH CENTURY

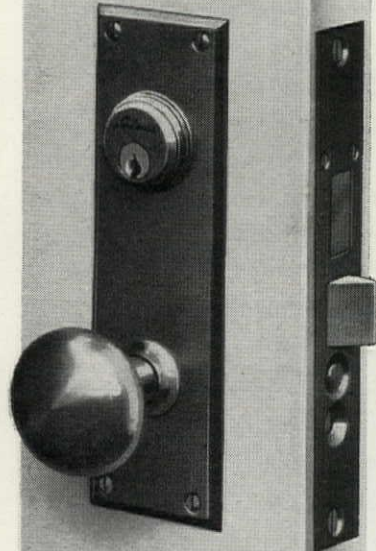
Types of books included: treatises, pattern-books, travel and garden books.

- 26) Robert Adam (1728-1792): *Rvins of the Palace of the Emperor Diocletian . . .* [London] 1764.

- 27) Robert and James Adam (d. 1794): *The Works in Architecture . . .*, London, 1773-1822.

- 28) Jacques François Blondel (1705-1774): *Cours d'Architecture . . .*, Paris, 1771-1777.

(Continued on page 118)



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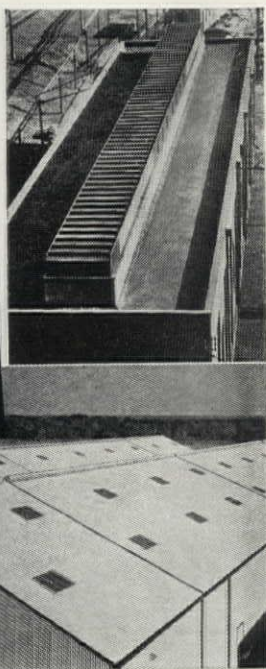
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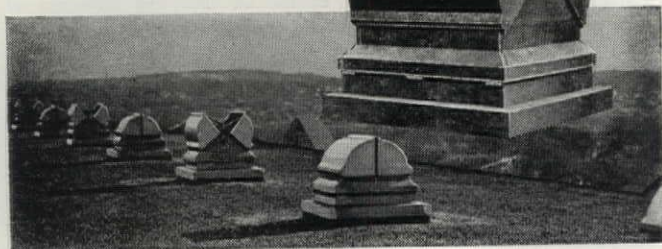
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Reviews

(Continued from page 116)

- 29) Colin Campbell (d. 1729): *Vitruvius Britannicus* . . . , London, 1715-1725.
- 30) Sir William Chambers (1726-1796): *A Treatise on the Decorative Part of Civil Architecture*, London, 1759.
- 31) Thomas Daniell (1749-1840): *Oriental Scenery*, London, 1795-1807.
- 32) James Gibbs (1682-1754): *A Book of Architecture* . . . , London, 1728.
- 33) Guarino Guarini (1624-1683): *Architettura Civile* . . . , Turin, 1737.
- 34) William Kent (1684-1748): *The Designs of Inigo Jones* . . . , London, 1770.
- 35) Batty Langley (1696-1751): *Ancient Architecture Restored, and Improved* . . . , [London, 1742].
- 36) Abbé Marc Antoine Laugier (1711-1769): *An Essay on the Study and Practice of*

Architecture, London, 1756.

- 37) Claude Nicholas Ledoux (1736-1806): *L'Architecture* . . . , Paris, 1806. (Lacking this, Ledoux was represented by Ravel and Moreux, Paris 1945).
- 38) James Malton (d. 1803): *An Essay on British Cottage Architecture*, London, 1804, Second Edition.
- 39) Jean Mariette, *L'Architecture Française* . . . , Paris, 1727.
- 40) Jean Marot, *L'Architecture Française* . . . , Paris, 1727.
- 41) Robert Morris (fl. 1754): *Select Architecture*, London, 1755.
- 42) Jean François de Neufforge (1714-1791): *Receuil Elementaire d'Architecture* . . . , Paris, 1757-68.
- 43) William Pain (1730-1790): *The Practical Builder* . . . , Second Edition, London, 1778; Boston, 1792. *The Builder's Companion* . . . , London, 1758.
- 44) Charles Percier (1764-1838) and Pierre François Léonard Fontaine (1762-1853): *Palais, Maisons* . . . , Paris, 1798.
- 45) Giovanni Battista Piranesi (1720-1778): *Urbis Aeternae Vestigia* . . . , Rome, 1742.
- 46) Giovanni Poleni, Marchese, 1683-1761: *Memorie Istoriche della Gran Cupola del Tempio Vaticano* . . . , Padua, 1748.
- 47) Humphrey Repton (1752-1818): *Observations on the Theory and Practice of Landscape Gardening* . . . , Second edition, London, 1805.
- 48) Sir John Soane (1753-1837): *Sketches in Architecture*, London, 1793.
- 49) James Stuart (1713-1788) and Nicholas Revett (1720-1804): *The Antiquities of Athens*, London, 1762-1830.
- 50) Abraham Swan: *The British Architect*, London, 1745.
- 51) Isaac Ware (d. 1766): *A Complete Body of Architecture* . . . , London, 1756. *Designs of Inigo Jones and others*, [London, 1757?]
- 52) Robert Wood (1717-1771): *The Ruins of Palmyra*, London, 1753.

also exhibited:

Jacques François Blondel (1705-1774): *De la Distribution des Maisons de Plaisance*, Paris, 1737-38.

Architecture Française . . . , Paris, 1752-56.

Germain Boffrand (1667-1754): *Livre d'Architecture* . . . , Paris, 1745.

Sir William Chambers (1726-1796): *Plans . . . of the Gardens and Buildings of Kew* . . . , London, 1763.

Charles Louis Clerisseau (1722-1820) and J. G. LeGrand: *Antiquités de la France*, vol. 1, *Monuments de Nismes*, (second edition), Paris, 1804.

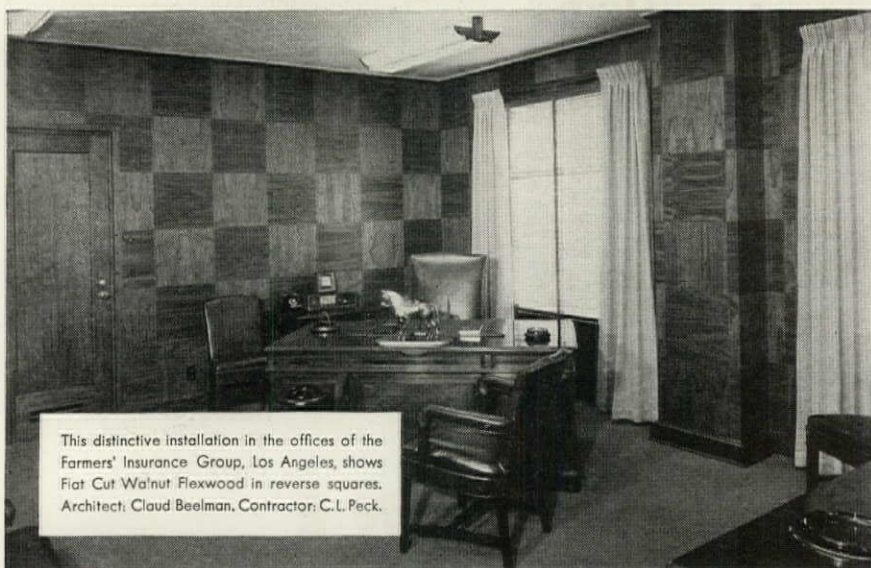
Ferdinando Galli da Bibbiena (1653-1743): *L'Architettura Civile* . . . , Paris, 1711, and 1777-83.

Johannes Kip (1653-1722) and Leonard Knyff: *Britannia Illustrata* . . . , London [1709].

George Louis Le Rouge: . . . *Jardins Anglo-Chinois* . . . , Paris [1776-87].

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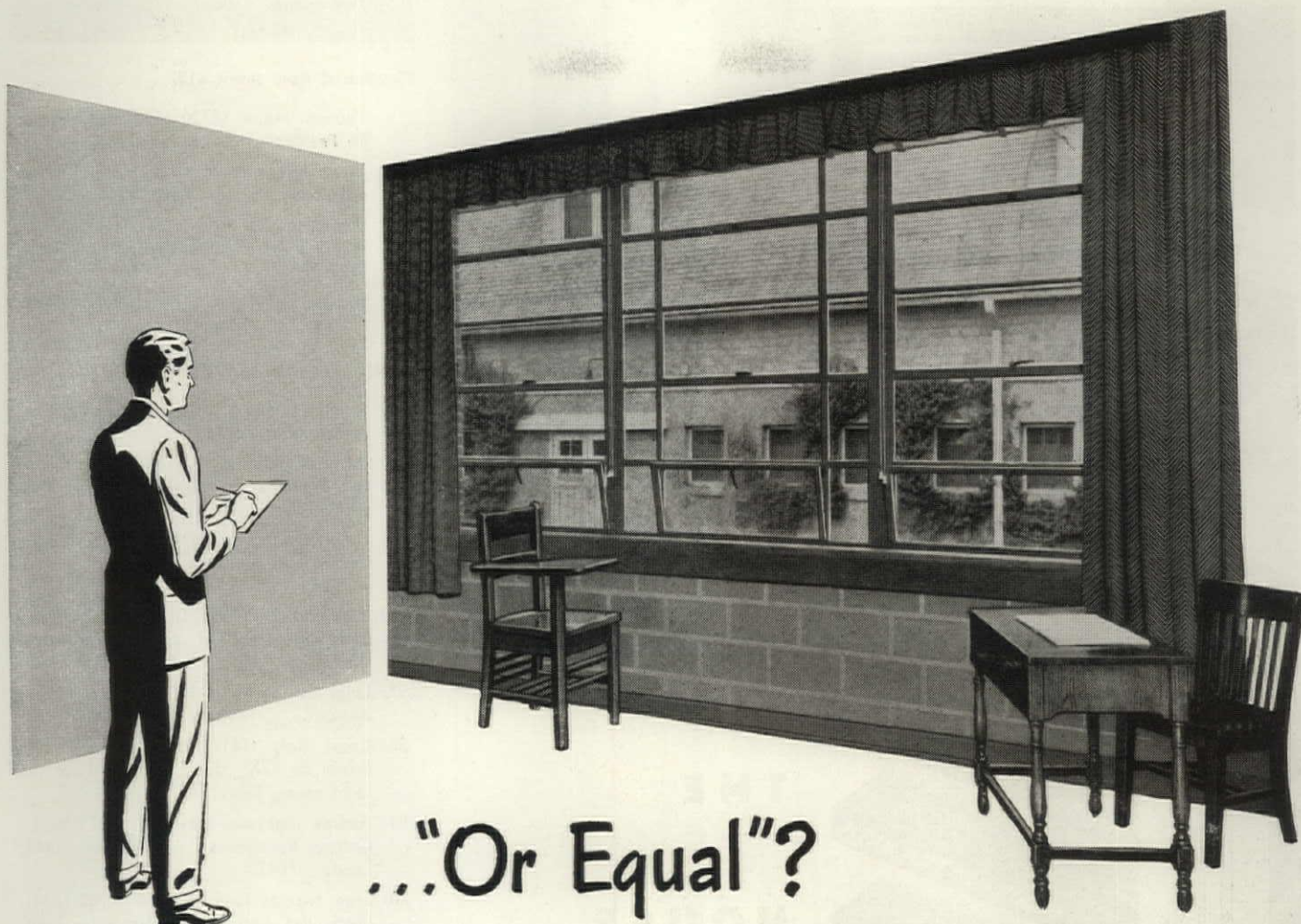


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Thomas Major (1720-1799): *Les Ruines de Paestum* . . . , London, 1768.

Marie Joseph Peyre (1730-1785): *Oeuvres d'Architecture* . . . , Paris, 1765.

Domenico de Rossi, ed. (1678-1742): *Studio d'Architettura Civile* . . . , Rome, 1702-21.

William Salmon (fl. 1745): *Palladio Londinensis* . . . , London, 1734.

F. NINETEENTH CENTURY

53) William E. Bell: *Carpentry Made Easy* . . . , Philadelphia [1858].

54) Asher Benjamin (1773-1845): *The American Builder's Companion* . . . , Charlestown, 1806.

55) Owen Biddle, (1774-1806): *The Young Carpenter's Assistant* . . . , Philadelphia, 1805.

56) John Britton (1771-1857): *The History and Antiquities of the Metropolitan Church of York* . . . , London, 1819.

57) Luigi Canina (1795-1856): *L'Architettura Antica* . . . , 1830-44.

58) Cesar Daly (1811-1894): *L'Architecture Privée du XIX^e Siecle*, Volume 1, of the third series, Paris, 1877.

59) Andrew Jackson Downing (1815-1852): *Cottage Residences* . . . , New York, 1842; London, 1842.

60) Jean Nicolas Louis Durand (1760-1834): *Precis des Lecons d'Architecture*, Paris, 1802-5.

61) Sir William Fairbairn (1789-1874): *On The Application of Cast Iron and Wrought Building Purposes* . . . , Third edition, London, 1864.

62) Eugene Clarence Gardner (1836-1915): *Homes and How to Make Them*, Boston, 1874.

63) Henry Hudson Holly (1834-1892): *Holly's Country Seats* . . . , New York, 1863.

64) Sir Ebenezer Howard (1850-1928): *Tomorrow*, London, 1898.

65) Heinrich Huebsch (1795-1863): *Die Altchristlichen Kirchen* . . . , Carlsruhe, 1862-63.

66) Jean-Charles Krafft (1764-1833): *Plans . . . des Plus Belles Maisons et des Hotels Construits a Paris* . . . , [Paris 1801-03?].

67) Minard Lafever (1797-1854): *The Modern Builder's Guide* . . . , New York, 1833.

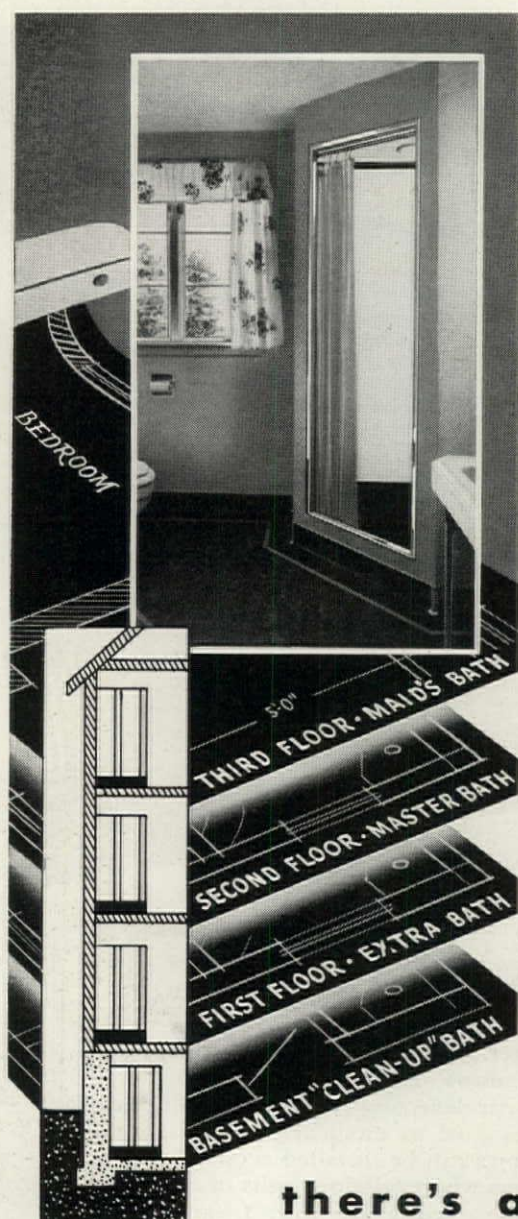
68) Paul, Marie Letarouilly (1795-1855): *Edifices de Rome Moderne* . . . , Paris, 1840-68.

69) John Claudius Loudon (1783-1843): *An Encyclopedia of Cottage, Farm, and Villa Architecture* . . . , (Second edition) London, 1835.

70) Auguste Grandjean de Montigny (1776-1850): *Architecture Toscane* . . . , Paris, 1815.

71) Peter Nicholson (1765-1844): *The Car-*

(Continued on page 122)



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(Continued from page 120)

penter's New Guide . . . , Eighth edition, Philadelphia, 1818.

72) Augustus Welby Northmore Pugin (1812-1852): *Contrasts*, (Third edition) Edinburgh, 1898.

The True Principles of Pointed or Christian Architecture . . . , London, 1841.

73) John Ruskin (1819-1900): *The Seven Lamps of Architecture*, London, 1849.

74) *The Stones of Venice*, New York, 1851.

75) Karl Friedrich Schinkel (1781-1841): *Sammlung Architectonischer Entwürfe* . . . , [Berlin, 1829-35].

76) Baron Taylor: *Voyages Pittoresque Dans l'Ancienne France*, Paris, 1845. Bretagne v.1.

77) Mariana Schuyler Van Rensselaer (1851-1934): *Henry Hobson Richardson and His Works*, Boston and New York, 1888.

78) Calvert Vaux (1824-1895): *Villas and Cottages* . . . , New York, London, 1857.

79) Eugene Emmanuel Viollet-le-Duc (1814-1879) *Dictionnaire Raisonné de l'Architecture Française* . . . Paris, 1854-68.

80) Gervase Wheeler: *Homes for the People* . . . , New York, 1855.

also exhibited:

John Britton (1771-1857) and Augustus Pugin: *Illustrations of the Public Buildings of London* . . . , (Second edition) London, 1838.

Orson Squire Fowler (1809-1887): *A Home for All* . . . , (Second edition) New York, 1854.

Joseph Michael Gandy (1771-1845): *Designs for Cottages, Cottage Farms* . . . , London, 1805.

Thomas F. Hunt: *Architettura Campestre . . . in the Modern or Italian Style*, London, 1827.

Charles Pierre Joseph Normand (1765-1840): *Receuil Varié de Plans et de Façades* . . . , Paris, 1815.

Charles Percier (1764-1838) and Pierre François Léonard Fontaine (1762-1853): *Receuil de Décorations Intérieures* . . . , Paris, 1812.

Samuel Sloan (1815-1884): *The Model Architect* . . . , Philadelphia [c 1852].

Austin A. Turner: *Villas on the Hudson* . . . , New York, 1860.

G. THE ARCHITECTURAL MAGAZINES

During the nineteenth century the professional magazines gradually assumed some of the influential role hitherto exercised by books. The following list is selective:

81) *Revue Générale de l'Architecture et des Travaux Publics*, volume 1, Paris, 1840.

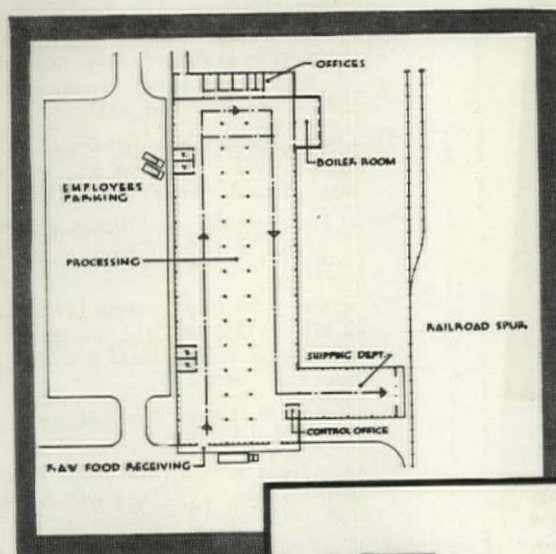
82) *The Builder*, volume 1, London, 1842-43.

(Continued on page 124)



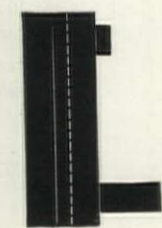
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Reviews

(Continued from page 122)

- 83) *The American Architect and Building News*, volume 1, Boston, 1876.
- 84) *The Architectural Review*, volume 1, Boston, 1891.
- 85) *The Architectural Record*, volume 1, New York, 1891.
- 86) *Der Architekt*, volume 1, Vienna, 1895.
- 87) *The Architectural Review*, volume 1, London, 1896.
- 88) *The Studio*, Special Numbers such as "The Art Revival in Austria", London, 1906.

also exhibited:

Progressive Architecture, volume. XXIII, New York, 1948.

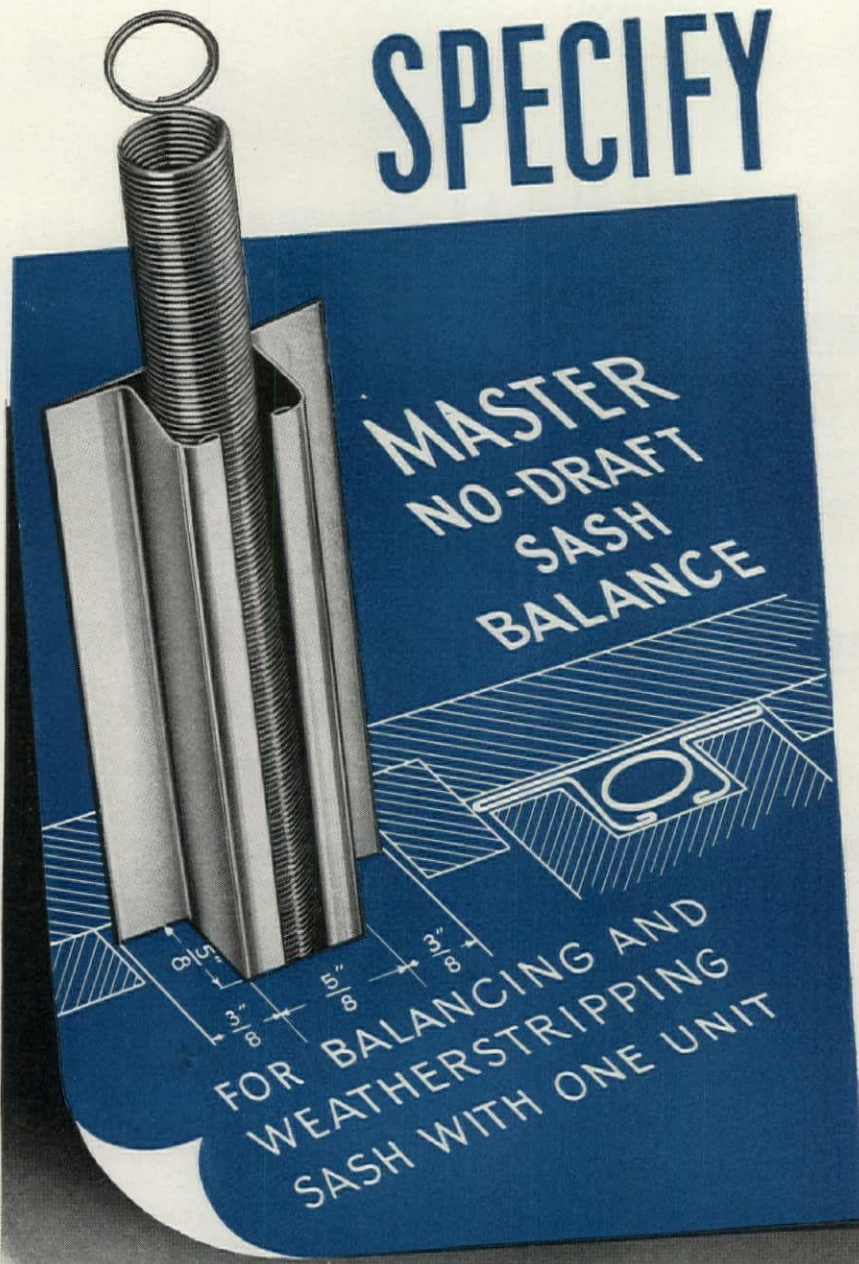
H. TWENTIETH CENTURY

- 90) Alfred H. Barr, Jr., (1902-), Henry Russell Hitchcock (1903-), Philip Johnson and Lewis Mumford (1895-): *Modern Architects*, New York [c 1932].
- 91) Hendrik Petrus Berlage (1856-): *Gadanken Uber Stil in der Baukunst*, Leipzig, 1905.
- 92) Walter Gropius (1883-): *The New Architecture and the Bauhaus*, translated . . . by P. Morton Shand, (Second edition) London and New York 1937.
- 93) Charles Edouard Jeanneret-Gris (Le Corbusier) (1887-): *Vers une Architecture*, (Second edition) Paris [1924].
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- 95) McKim (1847-1909), Meade (1846-1928) & White (1853-1906): *A Monograph of the Work of McKim, Mead & White . . .*, New York [c 1914-15].
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- 97) Louis Henry Sullivan (1856-1924): *Kinder-garten Chats . . .*, (Third edition) New York, 1947.
- 98) Bruno Taut (1880-1938): *Modern Architecture*, London, New York, [1929].
- 99) Frank Lloyd Wright (1869-): *Ausge-führte Bauten und Entwürfe*, Berlin [1910].
- 100) . . . *Modern Architecture . . .*, Princeton, 1931.

For aid in making the selections and choosing the items to be exhibited I am indebted to: John C. Coolidge, Walter Creese, Agnes Addison Gilchrist, Talbot Hamlin, Henry Russell Hitchcock, Philip Hofer, Fiske Kimball, Richard Krautheimer, Hugh Morrison, James Grote Van Derpool, Heathcote Woolsey.

My colleagues and students and the staff of the Sterling Library have rendered many services, especially Barbara Simson, and Henry Fuller but the responsibility for errors and omissions is mine.

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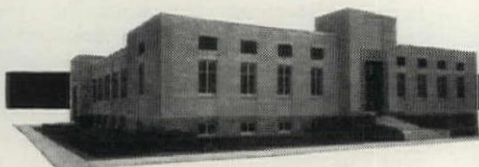
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By BERNARD TOMSON



Can a public housing development discriminate against any group in its choice of tenants? An early column of this series (December 1948 P/A) pointed out that a political entity such as the U.S. Government, a state, a city,

or the like, could not do so. It further pointed out that courts were prohibited from enforcing racial restrictive covenants. The same column, however, reported a case then pending in a lower court in New York, involving a housing

development called Stuyvesant Town and constructed by the Metropolitan Life Insurance Company at a cost of 90 million dollars. There the issue was whether Stuyvesant Town, a private company, could discriminate against Negro tenants although it had been substantially aided by the City and State of New York in the financing of the development. This column pointed out that the case was worth watching on appeal, since it involved an issue of vital importance not only to the public but also to the construction industry and to architects and engineers. The Court of Appeals of New York has, of recent date, handed down its decision on this appeal, and the case may now further determine the issue for the country, since it has been announced that an application will be made to have the case appealed to the U.S. Supreme Court.

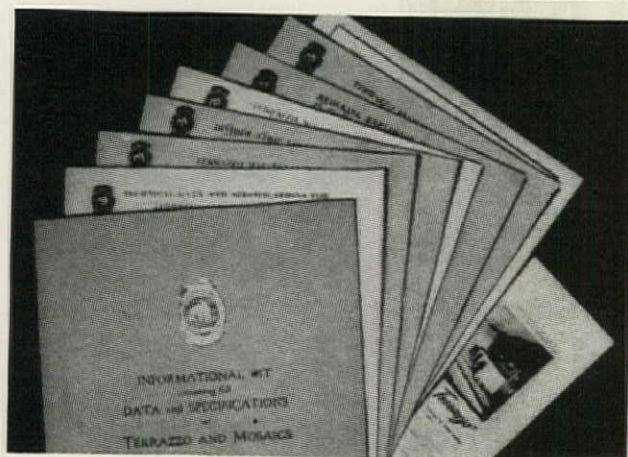
By a four to three vote, the highest court in New York State held that a private corporation was free to discriminate in its choice of tenants even though it had been given substantial aid by the government before and during construction.

Stuyvesant Town, which houses 25,000 persons, was constructed in conformity with a contract between the City of New York and the Metropolitan Life Insurance Company, pursuant to a statute of New York State which concerned itself with the clearance, reconstruction, and rehabilitation of substandard and insanitary areas. Although Stuyvesant Town is a private corporation, it was built with the aid of the State and City of New York in that the real property upon which the project was built was obtained through the condemnation powers of the City and in that the development is entitled to receive certain tax exemptions.

The chief issue presented was whether the aid given by the State and City of New York to the project made its operation a "governmental" project and thus subject to the "equal protection of the law" provisions of the federal and state Constitutions. The question was put by the court as follows:

"Upon that characteristic of the constitutional inhibition these parties have joined issue. Respondents contend that they are private companies beyond the reach of the constitutional restraint and free to select arbitrarily the tenants

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(Continued on page 128)

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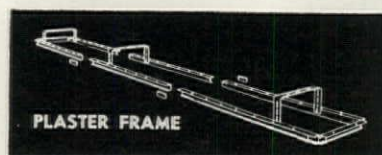
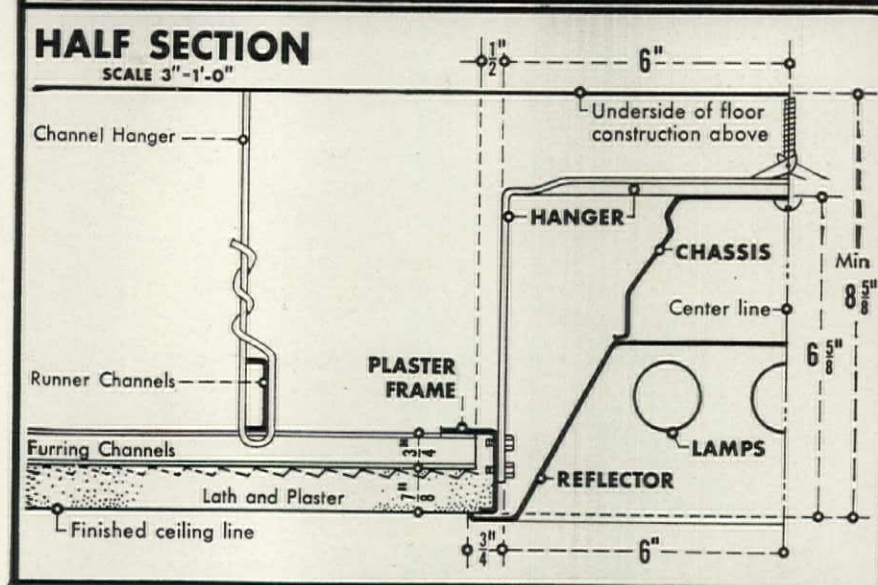
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(Continued from page 126)

who will occupy Stuyvesant Town. Appellants insist that the avowed discrimination falls under the constitutional ban because they say it has been aided and made possible by the action of the State. The issue is decisive, for the policy of respondents could not be followed by a governmental body...

"Appellants here rely upon those cases in urging that we must characterize as governmental action the rental policy of Metropolitan and Stuyvesant. They point to the acknowledged contribution made by government to the project—principally the tax exemption amounting to many millions of dollars, and aggregation of the land through use of the city's power of eminent domain and through exchange of bordering tracts for city streets which had been closed. Moreover, we are urged to consider the size of the project as in reality forming a large community within the city."

In determining, however, that Stuyvesant Town was free to choose its tenants in any way it saw fit, even if it discriminated, the majority opinion stated:

"Commissioner Robert Moses, active in the plan, stated publicly to the Governor and the Board of Estimate that if any requirement was imposed which deprived the landlord of the right to select its tenants, no private venture would go into the business. Certainly the general impression was created—which Metropolitan did nothing to dispel—that Stuyvesant Town would not rent to Negroes. For that reason and others, unsuccessful attacks were made upon the desirability of the project. In the Board of Estimate at least three votes were cast against approval of the contract on the ground that exclusion on racial grounds would be practiced. The contract was finally approved without any provision regarding discrimination in the selection of tenants..."

"The State of New York has consciously and deliberately refrained from imposing any requirement of non-discrimination upon respondents as a condition to the granting of aid in the rehabilitation of substandard areas. Furthermore, it has deliberately refrained from declaring by legislation that the opportunity to purchase and lease real property without discrimination is a civil right..."

"Tax exemption and power of eminent domain are freely given to many organizations which necessarily limit their benefits to a restricted group. It has not yet been held that the recipients are subject to the restraints of the Fourteenth Amendment..."

"To cite only a few examples: the merchant marine, air carriers, and farmers all receive substantial economic aid from our Federal Government and are subject to varying degrees of control in the public interest. Yet it has never been suggested that

(Continued on page 130)

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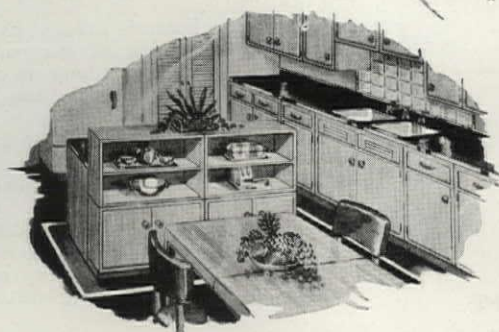
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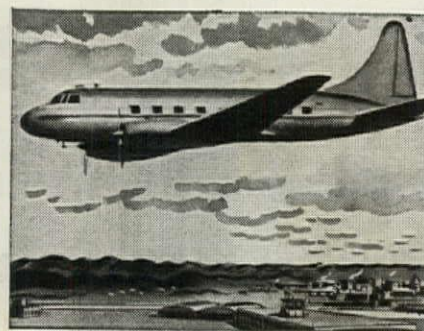
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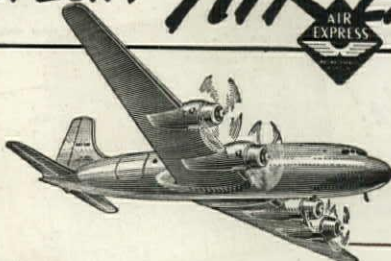
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(Continued from page 128)

those and similar groups are subject to the restraints upon governmental action embodied in the Fifth Amendment similar to the restrictions of the Fourteenth . . .

"We are agreed that the moral end advanced by appellants cannot justify the means through which it is sought to be attained. Respondents cannot be held to answer for their policy under the equal protection clauses of either Federal or State Constitution. The aid which the State has afforded to respondents and the control to which they are subject are not sufficient to transmute their conduct into State action under the constitutional provisions here in question."

Three of the judges of the New York State Court of Appeals came to an entirely opposite conclusion. The dissenting judges stated that the determination of the majority of the court—that the discrimination practiced had not been aided by the state, nor performed by private persons acting in a governmental capacity—was an argument without real substance. The dissenting judges stated:

"The average citizen, aware of that truth but unschooled in legal niceties, will, I venture, find the decision which the court now makes extremely perplexing. While the Stuyvesant Town housing project was in blueprint and under construction, the public understood, and rightly, that it was an undertaking on which the State and the City of New York had bestowed the blessings and benefits of governmental powers. Now that the development is a reality, the public is told in effect that, because Metropolitan and Stuyvesant are private companies, they are not subject to the equal protection clause, and may, if they choose, discriminate against Negroes in selecting tenants. That conclusion strikes me as totally at odds with common understanding and not less so with the facts and circumstances disclosed by the record."

The minority of the court argued that the concept of "state action" is an expanding one and that the activities of the state and city governments in this case were of such a nature as to bring the operation of this project within the proscription of the federal and state constitutional provisions providing for equal protection under the law stating:

"As long as there is present the basic element, an exertion of governmental power in some form, as long as there is present something 'more' than purely private conduct (see *Shelley v. Kraemer*, supra, 334 U.S. 1,13), the momentum of the principle carries it into areas once thought to be untouched by its direction.

"... the Fourteenth Amendment is no longer satisfied by a mechanical finding that the discriminatory conduct was not perpetrated by legislative, ju-

(Continued on page 132)

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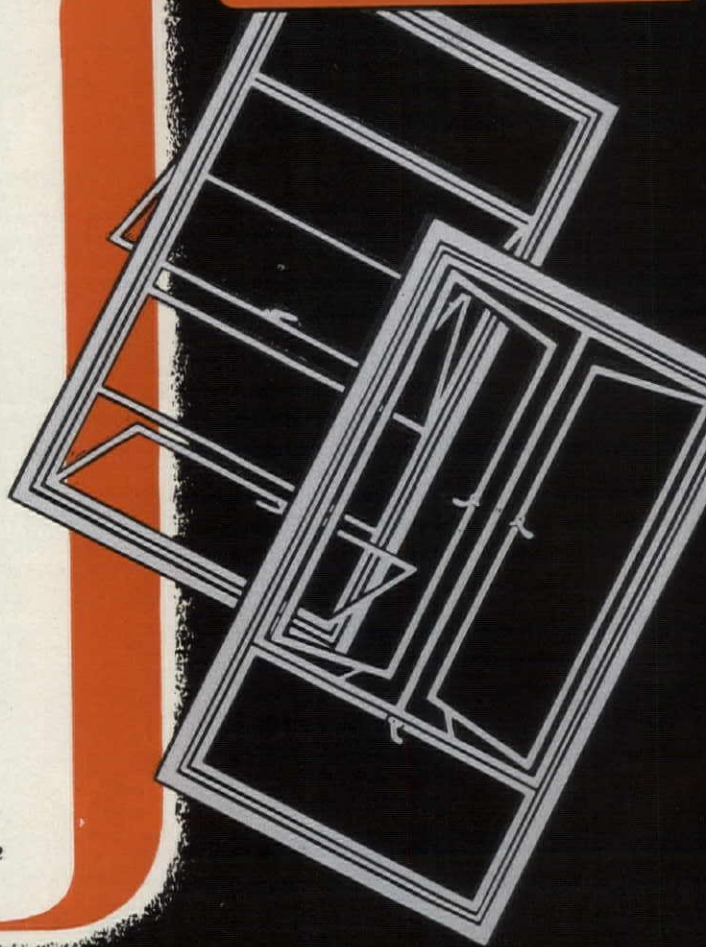
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(Continued from page 130)

dicial, or executive officials of the State. The concept of 'state action' has been vitalized and expanded; the definition of 'private' conduct in this context has been tightened and restricted. When private individuals or groups move beyond 'matters of merely private concern' and act in 'matters of high public interest,' the test is not, Mr. Justice Cardozo has written, whether they are 'the representatives of the State in the strict sense in which an agent is the representative of his principal.' The test is whether they are to be classified as representatives of the State to such an extent or in such a sense that the great restraints of the Constitution set limits to their action."

The minority of the court further felt that the act of New York City in entering into the contract with the Metropolitan Life Insurance Company, which did not specifically provide against discrimination, constituted governmental participation in illegal discrimination. Before the contract was executed this very question was raised and the intention of Stuyvesant Town not to rent to Negroes was made clear. Therefore, in accepting such a policy, the government, said the minority judges, was actually participating in conduct which is not constitutionally sanctioned.

The minority opinion further referred to the provision of the New York State constitution which provides "no person shall be denied the equal protection of the laws of this state or any subdivision thereof." The dissenting judges argued that this provision did not refer to "state action" and was therefore broader in scope than the Fourteenth Amendment of the Federal Constitution which prohibits discriminatory state action. The minority in its opinion stated:

"It is impossible to perceive or conjecture a benefit from the creation of a private barony in the heart of New York City, free of constitutional safeguards and devoted to undemocratic practices. It is impossible to balance the essence of democracy against fire-proof buildings and well-kept lawns. Fortunately, the Constitutions, Federal and State, forbid our putting the former into the judicial scales just as they forbade the City officials from putting it upon the bargaining table. The mandate that there be equal protection of the laws, designed as a basic safe-guard for all, binds us and respondents as well to put an end to this discrimination."

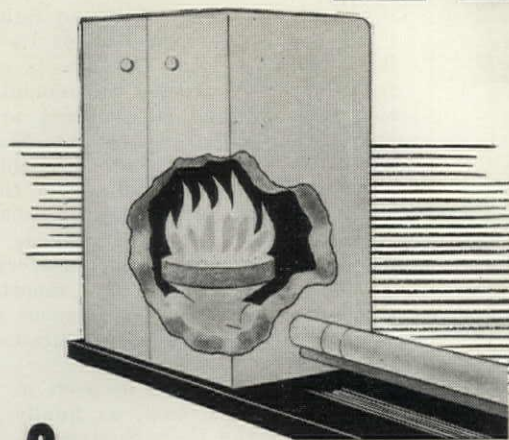
The points of view of the majority and minority opinions are stated at length because they reflect the fundamental disparity, well stated, between the conflicting points of view, that only the United States Supreme Court can determine.

The architect and builder will, even

(Continued on page 134)

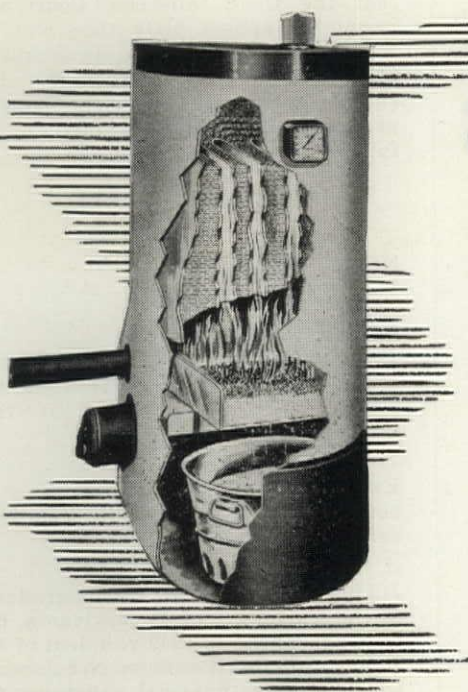
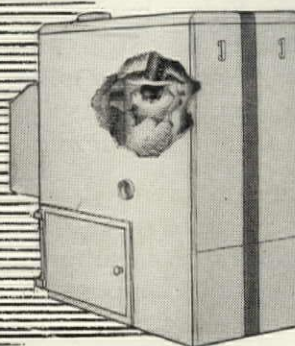
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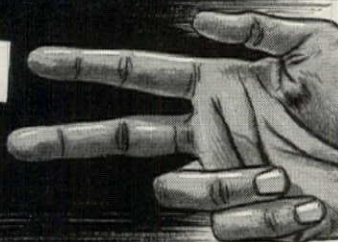
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it's the law

(Continued from page 132)

after such a definitive legal solution, still have to struggle with the sociological problem this decision points up.

The practical implications of this case are not to be dismissed lightly. Congress has just provided for 1.5 billion dollars in loans and grants over the next five years for the rehabilitation of slum and substandard areas and for urban redevelopment. States will adopt or have adopted enabling legislation to take advantage of these subsidies. The right to select tenants without restriction or, contrariwise, the duty not to discriminate in the selection of tenants will have an important effect on the rate of development and the nature of the housing programs in the various states.

In many places the decision in the *Stuyvesant Town* case, as finally determined by the U. S. Supreme Court, will decisively determine the activities of private companies in redevelopment construction. Certainly no such construction can be planned or executed without a thorough consideration of the problem posed. In the interests of a definitive legal answer to the problem, on a national scale, it is to be hoped that the U. S. Supreme Court will permit an appeal. Only then will the construction industry and its architects know how best to approach the slum clearance and redevelopment housing program that is to be met in the future.

NOTICES

AWARDS

The John Stewardson Memorial Scholarship in Architecture for 1949 has been awarded to JOHN VON GUNTEN, University of Pennsylvania.

EERO SAARINEN has been awarded an honorary master's degree by Yale University.

JULIUS WALTER ROTH, recent graduate of the University of Pennsylvania, has been announced as 1949 recipient of the Henry Gillette Woodman Scholarship, which provides financial assistance for one year of travel in Europe.

EXHIBITION

THE WORK OF RICHARD J. NEUTRA is currently on exhibition at the Museu de Arte de Sao Paulo in Brasil. Other shows to be presented this year include Le Corbusier's "New World of Space" exhibit, Roberto Burle-Marx gardens, and a retrospective exhibit of Warchavchik works.

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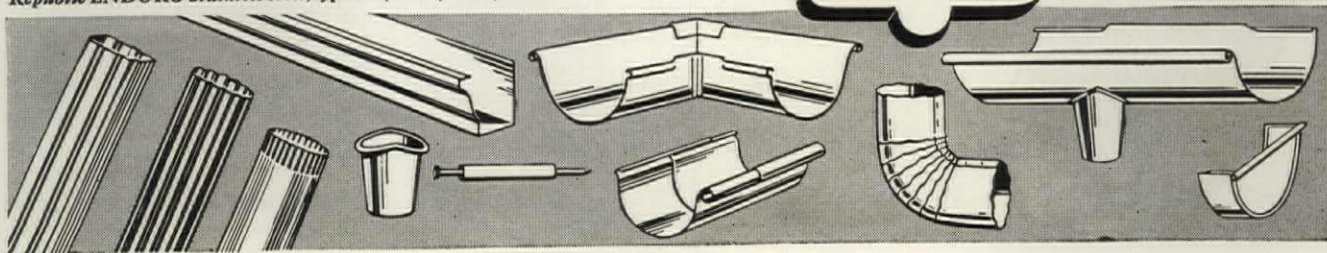
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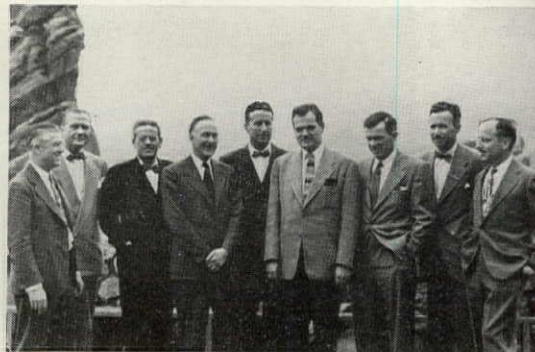


P/A—JAY-CEE COMPETITION: report of the jury

(Continued from page 51)

it promised so well and had solved the major problems of planning and appearance so ably that they wanted to be sure it would be carried out to the best advantage in detail in the final drawings. For example, they cautioned the designers to study carefully the surfacing of the exposed concrete

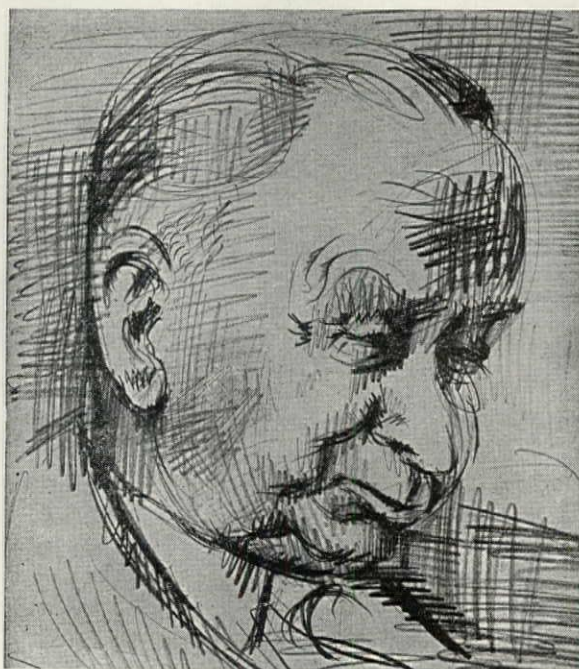
structure; they wondered if the trade entrance might be omitted to advantage, and pointed to the problems this would raise in transition from the entrance terrace to the lower grade; they suggested planting beds under the entrance roof, next the glass wall of the conference room and library; it was



The Jury and advisors at a luncheon in their honor given by University of Denver. Left to right: Chancellor Alfred C. Nelson of the University, J. Robert F. Swanson, Robert Law Weed, Thomas H. Creighton, Karl Fred Kamrath, Jedd Stow Reisner, Hugh Stubbins, Pietro Belluschi, and Director Carl Feiss, of the School of Architecture at University of Denver.

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felt that the trellis at the entrance might be simplified.

second prize

The Jury was divided in its opinion of this project. Some found it the most stimulating of the winning schemes; others felt that its merits were overshadowed by its faults. To the majority of the Jury it would present an imposing view from the park; spaces created within and without the building seemed to be excellently handled in a creative manner. The long narrow form and the square form complement each other, and the construction indicated is consistent with each of those elements. In the division of columns and window space there is a studied casualness difficult to achieve. The building is raised up from the ground all along its length and actually utilizes the space underneath (it is one of the few plans which arranged for parking cars under cover).

However, there is an arbitrary plan separation in a building which is too small to be split. The inflexible plan, caused by the separation, would make the building function with difficulty. Office spaces are put in three different places, which would complicate day-to-day work, and would make future expansion difficult. In fact, the expansion that is indicated would destroy the very design quality that appealed to the Jury. Lighting would be poor on the ground floor, due to the excessive overhang. Air conditioning is well placed, but is insufficient as shown.

To most, the building had an emotional appeal and a quality of fluidity,

(Continued on page 138)

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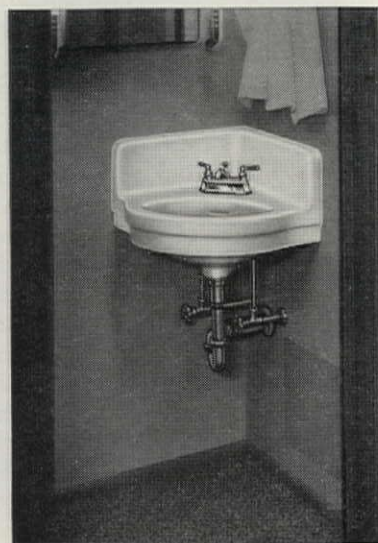
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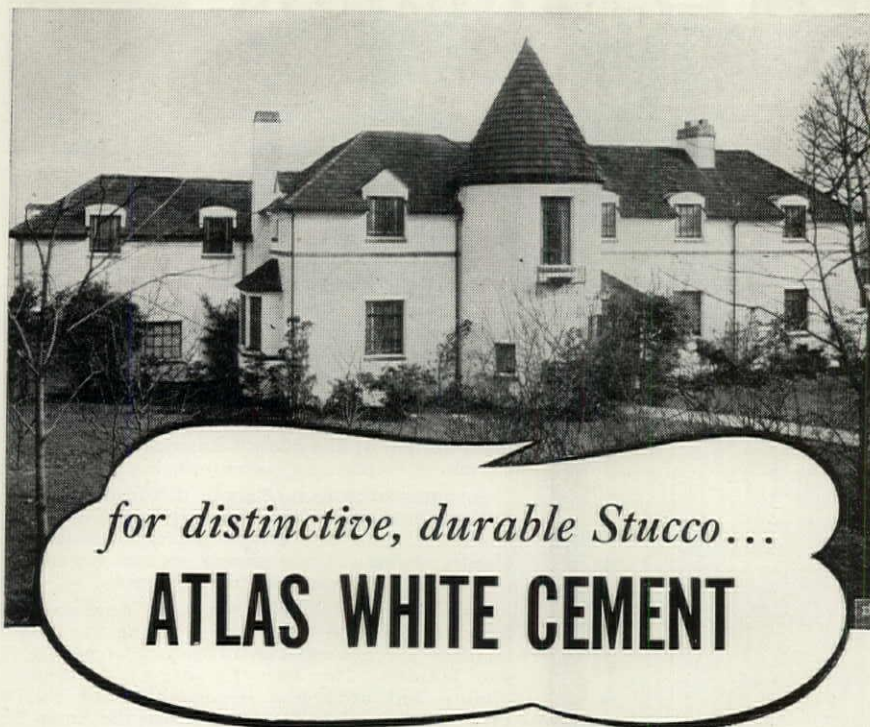
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P/A—JAY-CEE COMPETITION

(Continued from page 136)

but the Jury agreed that it had basic plan faults. They feared that it would be costly to construct and would not be a completely practical building in which to work.

third prize

In contrast to the dynamic quality of the Second Prize, this is an example of architecture in the classic understanding. It shows very good, rather static handling of form and space. However, the deftly handled abstract patterns shown in the elevations have little relationship to the interiors and the building in actuality would probably not look as it is indicated.

The building has a simple, good plan. The Memorial Hall is nicely related to the rest of the architecture without assuming undue importance; it is part of the very handsome functional lobby but is still out of the way. The entrance is very cleverly placed at the highest point. Construction is consistent, and well indicated. Though small, this would make an imposing building, very effective and monumental in character. However, the expansion would obviate the building's original simplicity.

fourth prize

This is a very handsome and well-presented building with clever handling of site possibilities. The ground floor approach is exciting and the memorial feature is well designed.

However, the garden court under the building would be spoiled by trucking and parking. Expansion could have been better handled if it had been shown generally to the east. The lighting was not well thought through: there is no light in the storage room, and none in the printing shop, where it could have been provided very easily.

Construction on the second floor and the support of the roof are not clearly shown. If this had been indicated, this drawing might possibly have had a higher placing.

jury of award

Pietro Belluschi, Chairman,
Karl Fred Kamrath, Hugh Stubbins,
J. Robert F. Swanson, Robert Law Weed,
Jedd Stow Reisner, Professional Advisor.

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PRODUCTS

(Continued from page 90)

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Recent Product Announcements

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- A 17-gun Nelson stud welding production unit is performing a strategic cost-saving function in the production of Lustron porcelain-enamelled steel houses. The machine is used to install studs on the bottom chord of roof trusses for the attachment of keeper strips which support roof insulation extending across the top of the plenum chamber. Seventeen welds in any single operating cycle can be completed in approximately six seconds.

- A new batt-type rock wool blanket has been added to its line of insulation materials by the Celotex Corporation. This improved paper-encased product will largely replace their open-faced batts, although the latter will still be available. Blankets are 15" x 24" and 15" x 48" and may be had in either full-thick or semi-thick types.

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